reconnect

Reconnecting relationships through technology

Connecting students in a large class using virtual tutorials: instructors' perspectives of student interactions and peer learning

Foong May Yeong, Zheng Wei Lee, Seow Chong Lee and Yuanyuan Chew
National University of Singapore

During the COVID-19 pandemic, governments worldwide attempted to stem the spread of the virus through measures including social distancing (Onyeaka et al., 2021). At the National University of Singapore, classes were moved online where students could continue with their education remotely (Adedoyin & Soykan, 2020). In the past two years, in our Cell Biology course with more than 200 students, we re-designed the course online based on the Community of Inquiry (CoI) model (Garrison et al., 2000) and created social presence through small-group tutorials mediated on MS Teams. Based on Vygotsky's idea of zone of proximal development (Vygotsky, 1978), we incorporated guided group annotations of research articles, and facilitated discussion sessions on short answer questions (SAQ) related to the lecture topics to foster collaborative-learning. During each 90-minute tutorial, the course coordinator (YFM) and two tutors (LSC and LZW) visited each virtual tutorial group for about 10 minutes per group to facilitate discussions and address students' questions. With only three instructors in a large class, there was limited time each could spend facilitating discussions within each group. As such, not all groups met with an instructor during some of the tutorials. Nonetheless, the students would have met us in at least two tutorials by the end of the year. During the first year, we noted discussions among students and interactions between students and ourselves. However, not all groups were actively discussing the tutorial activities. We also observed that only a few students in each group were actively engaged in the tutorials. Furthering improvement in the second year, we had students take turns acting as group leaders during the tutorials to take attendance and facilitate their peers to be on-task for group discussions. For the SAQ activities, students were tasked to answer the questions individually prior to online discussion sessions. During virtual tutorials, they then shared and discussed viewpoints with their peers. Post tutorials, students submitted their refined answers and reflected on whether the tutorials had enhanced their understanding or if they had contributed to the group discussions. Participation marks were awarded for these submissions. Consequently, there was increased student engagement during the tutorials, based on instructors' observations during the tutorials. Prior to this, we were not able to interact with students and only noted limited student engagement with the module content during large-class lectures. However, there were several aspects that can be improved. We could:

- set clearer expectations by explaining the rationale of organising small-group tutorials to students.
- explore designing more challenging group tasks where students will need to produce group artefacts (to encourage more discussion).
- provide better scaffolds targeted at guiding focused discussions amongst students

Overall, the virtual, small-group tutorials afforded opportunities for student interactions and overcame the need of physical venues to house many groups of students in face-to-face classes. We intend to incorporate such online tutorials into our subsequent blended learning design for large-class modules. However, teaching and learning activities need to be specifically designed to foster social presence. Ample time should be provided for individual attempts prior to group discussions and submission of group assignments would encourage better student interactions and peer learning.

Keywords: large class, community of inquiry, online tutorials, collaborative learning

References

Adedoyin, O. B., & Soykan, E. (2020). Covid-19 pandemic and online learning: the challenges and opportunities. *Interactive Learning Environments*, 1–13. https://doi.org/10.1080/10494820.2020.1813180

Garrison, R., Anderson, T., & Archer, W. (2000). Critical Inquiry in a text-based environment. *The Internet and Higher Education*, *2*(2), 87–105.

Onyeaka, H., Anumudu, C. K., Al-Sharify, Z. T., Egele-Godswill, E., & Mbaegbu, P. (2021). COVID-19 pandemic: A review of the global lockdown and its far-reaching effects. *Science Progress*, *104*(2), 1–18. https://doi.org/10.1177/00368504211019854

Vygotsky, L. (1978). *Mind in Society: The Development of Higher Psychological Processes*. Harvard University Press.

Yeong, F.M., Lee, Z.W., Lee, S.C., & Chew, Y.Y. (2022, December 4-7). *Connecting students in a large class using virtual tutorials: instructors' perspectives of student interactions and peer learning* [Poster presentation]. 39th International Conference on Innovation, Practice and Research in the Use of Educational Technologies in Tertiary Education, ASCILITE 2022, Sydney, NSW, Australia. https://doi.org/10.14742/apubs.2022.109