How do distance learners connect?

July 22 2019, by Jessica Hallman

Credit: AI-generated image (disclaimer)

In a typical college classroom, social connections are formed through face-to-face interactions. Through informal chats before and after class, group project meetings, and other exchanges, students are able to build community with their classmates and peers that often enrich their academic experience.

But how do distance learners connect?

In a recent study, a team of researchers from Penn State's College of Information Sciences and Technology found that creating computer-supported collaborative learning (CSCL) environments could help students identify common characteristics and life experiences they share with peers, which can build community and increase the likelihood that students remain in the program.

"The online world is missing social opportunities," said Na Sun, doctoral student in the College of IST and lead researcher on the project. "Unlike face-to-face contact, it's hard to reach out to others when you can't see them. That kind of presence and sense of community is very important."

To conduct their research, the team recruited more than 400 Penn State World Campus students to join an online community they created using Slack Workspace. Then, they developed a chatbot to prompt discussion topics and facilitate connections among users.

The chatbot asked users to publicly share their responses to questions such as "Where are you from?" and "What is a fun fact you want your peers to know about you?"

The researchers also conducted pre- and post-study surveys with participants, as well as with a control group of online learners who did not access the CSCL environment of Slack. They found that students felt a significantly stronger level of community by using the online platform when compared to students who did not use the CSCL.

"Belongingness and well-being are very important for people to live a good life," said Sun. "Grades are just one part of the learning process. It's also about the experience and how students feel about it."

After interviewing participants about peer connections they had made online in small groups, in classes and with Penn State in general, the

researchers discovered two general types of connections. First, they found that early, lightweight connections are formed through shared social identity, such as finding other students in the same profession, region or family status.

They also found that some peer connections are formed and nurtured through steps that learners take to vet and invite collaborators, including team members whose schedule and work ethic aligns with theirs—including reading their peers' introductory posts to discover evidence of some initial shared affinity.

"If you don't have something that connects you with each other, it makes it hard to bond as a team eventually; you're basically working with strangers," said one participant.

Others found it motivating to talk to those who were in similar life stages as themselves, balancing other responsibilities outside the classroom.

"What stood out is that a lot of people have jobs, have kids, have to clean and cook and everything," said another participant. "It's like they have to worry about so much more, and then they're in this class with me. If they can do it, I can do it."

The researchers propose that CSCL platforms should build and maintain opportunities for peer connections of varying types and strengths, from interactions with students in their classes, to facilitating shared-identity networks, to networking with fellow alumni for career advice.

Sun said that opportunities like these could help improve retention rates of students for universities offering online programs.

"When learners feel [connections as a result of] this social integration, it is more likely that they will want to stay [in the program]," she said. "It's

very important for us to build this social integration, not only on the instructor side but also on the technology side. The whole ecosystem should work together for this belongingness for online learners to feel like they are part of the community and that people are supporting them."

Xinying Wang, postdoctoral scholar, and Mary Beth Rosson, professor of IST, collaborated with Sun on the project, which was funded by Penn State's Center for Online Innovation and the College of Information Sciences and Technology. Their work earned an honorable mention at the 2019 CHI Conference on Human Factors in Computing Systems.

"That honor symbolizes the good quality of our college's work in human-computer interaction," said Sun. "It gives us a good opportunity to continue investigating community fostering."

The project is part of Sun's ongoing work that contributes to the understanding of online learning communities. In future projects, she plans to expand this concept to explore shared communities between residential students and online learners.

"Our ongoing work is an initiative responding to President [Eric] Barron's call to facilitate community and belongingness as part of Penn State's values," she concluded. "Community is one of the core values that we should embrace. We tried to build up this momentum so that everyone online, at University Park and at [commonwealth] campuses can feel this kind of community with online help."