

THEY LEARN, BUT ENJOY IT LESS

Online students miss the communication found in class.

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GLOBALIZATION MEANS more technology, and education is no exception. International distance courses can include real-time audiovisual communication between people in different countries, something rarely feasible even 10 years ago. They would seem to be ideal for today's technologically savvy students, who have grown up with everything from Youtube to Ebay and iChat to Skype.

But not all aspects of communication can be captured with these new tools. While some non-verbal communication cues like gesturing, facial expression, and posture are transmitted by the virtual interface and help build social presence, others, like eye contact and physical proximity, are lost.

Our study sought to find out how learning is affected by this change in communication structure. In a time when everyone has an online avatar, is face-to-face communication really necessary in the classroom?

We surveyed students enrolled in a graduate-level civil engineering course, taught both in face-to-face and international distance formats, to identify factors influencing student satisfaction (affective learning) and knowledge acquisition (cognitive learning).

We found that today's students still prefer more social presence than real-time audiovisual technology currently provides. When participation decreased in a virtual classroom, so did student satisfaction. In the non-distance class we studied, much of the student-instructor interaction occurred one-on-one after class and during breaks. But most distance courses preclude this type of informal chatting — the

conversation ends when the audiovisual feed terminates. Distance course instructors can make up for lost out-of-class interaction by asking frequently for questions and comments during class. By breaking the ice, the instructor creates a more conversational atmosphere and helps students overcome concerns about using the audiovisual technology.

Added communication efforts by instructors may be particularly important when students are not familiar with the technology or when the technology is not easy to use. For example, even something as simple as a brief microphone delay can wreak havoc on class participation during a distance course. In spoken conversation, pauses of different lengths help the listener interpret the speaker's expectations: during a pause, did the speaker pause for effect or did the speaker ask a question? Failure of the listener to take the floor following a pause can create a breakdown of interactivity. It follows that if technology alters natural communication patterns and introduces awkward silences, students become less likely to initiate conversations, and social presence deteriorates. Therefore, as distance learning technologies continue to evolve, special consideration should be given to improving the clarity and reliability of audio equipment.

If affective learning suffers in a distance course, what about cognitive learning — did students in the distance course fare worse with respect to knowledge gained? Based on assignments and exams, there is no difference in cognitive learning between the two formats. In

other words, students in the distance course learned just as much as their non-distance counterparts despite being less satisfied.

This uncoupling of affective and cognitive learning hints at the complexity and flexibility of learning: When the instructor's social presence decreases, students may devise alternate strategies to learn material other than relying on the instructor. For example, greater reliance on independent study, peers, or teaching assistants could all potentially improve cognitive learning while not necessarily altering satisfaction.

Establishing a high social presence in



distance courses may create a classroom atmosphere that is more similar to non-distance courses, and hence more familiar to students. Therefore, prompting participation during class and improving audio transmissions may make the distance learning environment more similar to “real life” and more enjoyable for students.

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