

## **An Online Peer Tutoring System Increases Student Perceptions of Learning in a Blended Organic Chemistry Course**

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Student isolation and a lack of efficient knowledge diffusion are long-standing problems in online and blended courses. Using technology to encourage independent learning tends to obscure critical social aspects of education. This is particularly true for large courses, in which student-instructor interaction and feedback may be limited. We have observed that without structured social activities, student-student interactions tend to be superficial; however, longitudinal studies have shown that organic chemistry students have a strong desire to seek help from others and report large perceived learning gains when doing so. Thus, there may be a place for structured social activities in large organic chemistry courses.

With this hypothesis in mind, we have developed, piloted, and evaluated a peer tutoring website for use in a large organic chemistry course at Illinois. The site is designed to address both logistic and educational problems associated with large “analog” peer tutoring activities. Student reports of their learning gains due to peer tutoring activities were remarkably high relative to long-standing course activities, suggesting that well structured social activities support student learning in large courses.