



College of Education

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Research Highlights of Current Faculty Projects

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Online Learning Environments

New advances in Internet-based technology have brought challenges and opportunities to education and training, in particular through online instruction, a form of distance education delivered over the Internet. For many, this type of instruction is perceived as a major breakthrough in teaching and learning because it provides opportunities for learners in distant or disadvantaged locations. However, online instruction may hinder effective teaching and learning due to the complexity and changing nature of technology, isolation of students and faculty, and potential to reduce standards.

The goal of Human Resource Education researchers Steven Aragon and Scott Johnson and their colleagues was to understand the outcomes and processes of online instruction as compared to traditional, face-to-face environments in order to help educators and researchers make more informed decisions about future online course development and implementation. Using a graduate level instructional design course for human resource development professionals, their first exploratory empirical study compared an online course with an equivalent course taught by the same professor in a traditional, face-to-face format (19 students each) on the basis of student satisfaction; perceptions of interaction, structure, and support; and student learning outcomes. Their second study examined the relationship of student learning style preferences and learning outcomes across the two course formats on the basis of Curry's Theoretical Model of Learning Style Components and Effects, which assesses learning styles based on motivation, task engagement, and information-processing habits.

What this research shows:

Both studies demonstrate that online instruction can be as effective as traditional, face-to-face instruction. The first study shows no difference in the quality of the learning that takes place. Student satisfaction and perceptions of interaction, structure, and support tend to be slightly more positive for students in a traditional course format. Specific areas where this discrepancy occurred include the instructor providing appropriate and adequate illustrations and feedback. The second study shows that although some learning style differences were found between online and face-to-face teaching, these differences were not significantly apparent when student learning outcomes were controlled. Overall, students did not differ on motivation and task engagement. Significant differences in learning styles were found in information processing habits. The online students tended to use reflective observation and abstract conceptualizations skills, while the face-to-face students were more likely to engage in active experimentation.

What this research means for educators and trainers:

- ⇒ The lack of difference in the learning outcomes from the two course formats, even though students have different learning styles, supports the continued development of online instruction programs;
- ⇒ In order to develop specific strategies for increasing student confidence levels in online programs, researchers need a better understanding of why online learners report lower levels of comfort with their learning;
- ⇒ Educational practitioners who develop online courses need to be familiar with the limitations of online programs (e.g., avoid requiring frequent verbal and behavioral communication between students and the instructor); and
- ⇒ Online course instructors should increase efforts to improve overall student/instructor communication in the areas of instructor feedback and student progress.

For more information about this research:

Johnson, S. D., Aragon, S. R., Shaik, N., & Palma-Rivas, N. (2000). Comparative analysis of learner satisfaction and learning outcomes in online and face-to-face learning environments. *Journal of Interactive Learning Research*, 11(1), 29–49.

Aragon, S. R., Johnson, S. D., & Shaik, N. (2002). The influence of learning style preferences on student success in online vs. face-to-face environments. *American Journal of Distance Education*, 16(4), 227–243.

We invite your response...

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