

THE EFFECTS OF INTRODUCING ONLINE EDUCATION VERSUS CLASSROOM LEARNING

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ABSTRACT

Online learning can be as good or even better than in-person classroom learning. Research has shown that students in online learning performed better than those receiving face-to-face instruction, but it has to be done right. The best online learning combines elements where students go at their own pace, on their own time, and are set up to think deeply and critically about subject matter combined with elements where students go online at the same time and interact with other students, their teacher and content. Teachers need to distill their key goals and leverage technology features to meet them. Used well — online chat, discussion forums, replayable video lessons, online meetings, etc. offer tremendous opportunities to make students more engaged (and accountable) compared to time-strapped classrooms where students hide and few hands shoot up. The downside is that this stuff takes work; we know from research that pedagogy matters. Educators can't just scan the textbook, record the lesson, put them online and expect the same or better learning.

Keywords: Online Education, Academic, E- Learning, Classroom Education

INTRODUCTION

Online educational opportunities have blossomed as parents, students, college and university administrators and state and federal legislatures try to grapple with the problem of increasing education costs. The potential advantages of offering courses online are numerous: There is a perception that online classes are a more cost-effective way to offer some courses. Students and teachers need not physically meet in a classroom. Therefore, people in remote areas can have access to courses to which they might not have had access otherwise. In the case of asynchronous courses, students can more easily fit their learning time into their schedule. This allows more flexibility, particularly to the non-traditional students who may have family or work obligations not normally associated with the traditional undergraduate student population. More students can consume the material simultaneously without stretching classroom capacity.

For all of the advantages online classes offer, doubts remain as to whether or not online education can live up to its promises. For example Hoxby (2014) examines the sustainability of online education at both non-selective and highly selective institutions. She concludes that the massive use of online education is only sustainable with some non-selective institutions. In a separate study, Hoxby, (2017) also finds that there is little to no evidence of either large cost savings or large returns-on-investment for online education. (In fact, she finds that students personally pay more for online education relative to face-to-face education.) Although the online approach offers freedom, it requires more discipline from both students and educators. Students must make the effort to complete the material within the required time frame. They need to muster the discipline to progress through the class in a timely manner – a discipline traditionally imposed by the class schedule. When a class does not meet in a particular place or at a particular time educators must plan in advance to ensure that all material is available and assessed in a timely manner. Educators must also make sure the person getting credit for the class is, indeed, the person who does the work in the class. But perhaps the most important concern is whether or not online courses offer learning opportunities that are comparable in

quality to traditional, face-to-face courses. Such assessment is notoriously difficult to conduct. Students were randomly assigned to either an online or face-to-face section of the same class to minimize sample selection bias. There were two broad measures of student performance: the exam average for the entire course and the improvement on a post-test relative to a pre-test. The pre- and post-test had both standardized TUCE questions and instructor questions. The face-to-face class performed statistically, significantly better than the online class in terms of the exam average and improvement in post-test instructor questions. There was no statistical evidence for a difference in improvement in total post-test questions or improvement in post-test TUCE questions. These mixed results remain when using ordinary least squares analysis to control for the student's SAT math score (or ACT equivalent), the student's overall GPA prior to taking the course, the student's gender and the student's overall credit hours prior to taking the course.

REFERENCES

- Hoxby, Caroline M. (2017). The Returns to Online Postsecondary Education, *NBER Working*: 23193.
- Hoxby, Caroline M. (2014). The Economics of Online Postsecondary Education: MOOCs, Nonselective Education and Highly Selective Education, *NBER Working*: 19816.