Chapter 1
Online Delivery of Introductory Economics Content in the United States

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ABSTRACT
Introductory economics courses for undergraduates have increasingly been delivered online. This chapter documents not only the number of economics courses taught online and the types of institutions where they are offered, but it also highlights how the online environment changes how students learn and faculty members teach. As for how students perform in an online classroom and whether learning online is superior or inferior to learning face-to-face, the evidence is mixed. The overall finding with regard to student learning, however, is that there is no statistically significant difference in student learning in either the face-to-face or online environment. Finally, certain kinds of technology can enhance student learning in an online environment such as video lectures, blogs, and frequent homework assignments that guide students. This chapter concludes with a discussion of instructional design and how to make informed technology and assessment choices in the economics classroom that enhance student learning.

INTRODUCTION
The popularity of undergraduate economics courses has increased over time as not only students increasingly choose economics as a major, but also as economics courses become part of interdisciplinary majors, a college’s core requirements, and part of the increasingly popular business major. In 1998 it was estimated by Siegfried (2000) that about 40% of all undergraduates in the United States would take at least one economics course and that 52% of students who took one introductory economics course would enroll in the second introductory economics course (the discipline of economics is typically introduced over a two-course sequence consisting of the courses of Principles of Microeconomics and Principles of Macroeconomics) (p. 202). Siegfried (2000) estimated annual enrollment in economics classes at the time as 1.4 million students (p. 202). Although the data is over a decade old, the popularity of the discipline’s courses has not waned since then.

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Over the past fifteen years more and more economics courses have had an online component. At the same time as there has been an increase in the number of economics courses delivered online, there has been a similar increase in the conversations about how to properly instruct and learn economics in an online environment. With the vast majority of online economics courses designed for undergraduate students in the United States, this paper focuses on the past, present, and future trajectory of the online medium in introductory economics courses. After reviewing research around four key areas (whether online students learn as well, why some student self-select to learn online, what factors predict academic performance, and what kind of technology should be used in the online classroom), this chapter concludes with a discussion of the online learning medium in general and the permanency of the medium.

BACKGROUND

The academy is well known for being slow to adapt. Having said that, many colleges and universities have, over the past 15 years, digitized and delivered course material online. This is a move that is not without controversy. For some such as Taborrok (2012), when educational content is digitized and deployed online it is delivered in a consistent fashion without geographic restrictions and in so doing, the transition to an online medium can be seen as improving learning and increasing access (para. 6). For others such as Noble (1998), higher education delivered electronically is seen as coercive and a power struggle between professors and students who have the goal of learning on the one side and administrators and corporate interests who have the goals of boosting enrollments, controlling costs, and increasing revenue on the other side (para. 1).

The deployment of online education is being accelerated by a university system that is facing pressure to deliver more tuition income without significant increases in expenditures. At the same time, the economic and social value of higher education is being questioned as individuals bear a larger share of the economic burden without receiving an enhanced prospect of economic security after graduation. This has led to a growing backlash against the common advice given to pursue higher education with Ellsberg (2011) declaring that ambitious entrepreneurs who pursue their business interests above getting a college degree will create the jobs and innovation that are part of today’s economy (p. SR5). Finally, the traditional university system and its practices have been challenged by the rapid rise of for-profit institutions that compete aggressively for students who previously would have either not pursued an education or pursued an education at a public institution that has scaled back its operations in the face of declining public support. When we say that course material is delivered online, it is delivered oftentimes delivered in one of three ways:

- Completely online version of an existing face-to-face course with students having the online offering of the class substitute for the face-to-face offering of the class
- A face-to-face class that has a significant online component so as to improve engagement and student learning (more commonly known as a hybrid course, technology-mediated instruction, or blended learning)
- A completely online class that is offered to a large number of students and may or may not provide academic credit and the student may or may not earn a grade (more commonly known as a massive open online course or a MOOC)

Thus, the understanding we have of online education is complicated by the fact that it occurs in several forms. In perhaps its simplest form, the online class delivers content to students in a way that substitutes for the equivalent face-to-face