

# Chapter 5

## Student Behavior in an Online Learning Environment: A Small Sample Study

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### ABSTRACT

*While online courses/programs have become a critical component in the strategy of higher education institutions, the majority of the current academic discussions and evidence are from the institutional side rather than from the students' points of view. An understanding of how students behave when studying an online course can provide a great insight into the effectiveness of online delivery which is the task we embark upon in this study. The chapter per the author carried out the task by, first, summarizing the studies on the implementation strategy of online courses, the "no-significant difference" literature, and the research on the unique characteristics of online learners. Second, the author attempt to understand online learner behavior by analyzing students participation in 15 online courses during the years 2012-2015. The sample includes 106 students and their detailed log-on minutes and grades. The author applied descriptive analysis, a one-way ANOVA, and a simple regression model. The result suggests substantially discounted student attention while learning online.*

### INTRODUCTION

The popularity of online education has been increasing in the world over the past decades. According to Allen and Seaman (2014), in 2002, less than one half of all higher education institutions reported online education was critical to their long-term strategy. However, in 2013, that number was at an all-time high of close to 70%. In the same year, the proportion of higher education students taking at least one online course was at a historical high of 33.5% too. Yet, according to the same study, less than one-third of academic leaders believe that there will no longer be concerns about the relative quality of online courses, although over 90% of those leaders believe that the majority of all higher education students will be taking at least one online course in five years' time.

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The most quoted favorable reason from many online instruction satisfaction studies is flexibility. Without the requirement of presenting in a classroom, flexibility indeed is a very appealing feature of online learning. Taking courses has become a very flexible way of studying for the current generation of students compared to the previous one. Research has indicated that the majority of online learners are now non-traditional students who are balancing the competing demands of work, life, and study commitments and elect to study online for the convenience it offers (Chen, Lambers, & Guidry, 2010; Thompson, Miller, & Pomykal Franz, 2013). As regards higher education institutions, online delivery also allows them to expand their recruitment territory.

While most of the stakeholders in the higher education sector seem to support the concept of online instruction, there are some prices attached to it that cannot be ignored. For instance, in his 2014 book, Deresiewicz pointed out that online delivery promotes a range of practices and behaviors that higher education ought to fight against such as passive learning, diminished attention, the displacement of reading by watching, teaching as showmanship, and the professorial star system. By comparing distance education to a mass-production assembly line process, Peters (1993) criticized distance education, saying that it reduces education to a kind of industrial production process, lacking the human dimension of group interaction, and even alienating learners from teachers.

The continuing interest in online education has created a growing and competitive market for online courses, which makes ensuring the quality of online courses an important long-term strategy for higher education institutions (Kozan & Richardson, 2014). The increased capabilities of online technologies have increased expectations for the effectiveness of online education (Means, Toyama, Murphy, & Bakia, 2013).

The rapid growth in online education over the past fifteen years has motivated substantial research concerning the efficacy of online relative to traditional, face-to-face learning. Since Russell (1999) coined the term “no significant difference”, numerous empirical studies report that the final course grades of students who take online courses are essentially the same as for students who take the same course in a face-to-face setting (Fendler, Ruff, and Shrikhande, 2018). There are also researchers and practitioners who question the effectiveness of online delivery and document worse performances of students in online learning environments. Using the empirical results from a series of surveys over eight academic terms with more than 500 students, Cole, Shelley, and Louis (2014) indicated that students overall rated their online instruction as moderately satisfactory, with hybrid or partially online courses rated as somewhat more satisfactory than fully online courses. More examples can be found in Chen, Lehman, and Armstrong (1991), and Brown and Liedholm (2002).

The main concern with online learning, according to researchers, is that online courses do not provide an educational experience that is equivalent to a traditional classroom. Many higher education leaders continue to raise questions about the educational effectiveness and experience of online instruction. Price and Shireman (2013) asserted that the lack of self-discipline may help to explain the higher drop-out rate encountered in online courses. Students can obtain knowledge from an Internet course if they are highly motivated to learn (Edmundson 2012). The learning appears to be more profound as students are more willing to engage (Smith, Ferguson, & Caris, 2001). Similarly, according to Everson (2009), in a traditional classroom, in-class work with the instructor looming nearby is often extrinsic motivation enough. However, in an online learning environment, students need to be motivated extrinsically to be successful. By analyzing a sample of 110 undergraduate students in psychology, Hoskins and Hooff (2005) identified student motivation as one of the key factors that influence student achievement in an

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