

# Student Engagement in Online Learning: What Works and Why

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## Overview

WITH PRESSURES TO INCREASE ACCESS to higher education, colleges and universities have focused on increasing the number of online courses and programs offered. Higher education is also being criticized for its retention and graduation rates, and pressure is building to find solutions. To ensure that online learning can help address these problems, professionals dedicated to online learning are under pressure to explore and evaluate strategies for getting students engaged in their online studies. These pressures are the genesis and reason for this monograph.

By applying the theories and techniques for student engagement in online learning, instructors and designers of online courses can improve and increase student engagement and help higher education produce graduates who can contribute to their families, communities, and the economy. The theories and research reviewed in this monograph provide important clues as to how to help students learn, stay enrolled, and finish a degree.

Engagement techniques may be one key to making online learning productive for the institution but, more importantly, ensuring that students are successful as they pursue a college degree. In fact, achieving student engagement in online courses may be more important than it is in on-campus courses because online students have fewer ways to be engaged with the institution and perhaps greater demands on their time and attention as well. In other

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words, engagement may be the critical key to making online learning an essential component of higher education and indispensable part of an institution's future.

By way of introduction to the monograph, this chapter presents more information on the various challenges to higher education at the current time and then provides a few essential definitions that inform the monograph. Then for those unfamiliar with the field of student engagement, the chapter presents a brief overview of the history of student engagement, as it has been developed to pertain to traditional instructional modes, with attention to the National Survey of Student Engagement (NSSE). The chapter discusses the major reasons for the interest in online learning and the subsequent importance of student engagement for online students. Finally, the chapter concludes with the relevance of the monograph to various professionals concerned with higher education and provides an overview of content in each subsequent chapter.

## The Challenges

As higher education is increasingly urged to improve its ability to enroll more students, ensure student learning, and improve graduation rates, and to do all this more efficiently, higher education institutions are looking for solutions. Online learning has been adopted by many institutions as a way to expand access to instructional programs and address the increase in many states of recent high school graduates as well as adults seeking further education or training, and to do so with an eye to controlling costs or avoiding construction of new buildings. The cost issue, made worse during the most recent economic crisis, has meant declining state resources for public higher education, uncertain student enrollments as many students must delay college or enroll part time, and greater public attention to increasing tuition rates and student debt levels. Many institutions have adopted online learning as a way to address these problems. In Allen and Seaman's (2012) survey of higher education institutions, 86.5% of the 2,082 responding institutions offer online courses and 62.5% offer complete online degree programs.

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Funding is an obviously critical issue that affects institutions and has led to a greater focus on online learning. Higher education institutions were deeply affected by budget cuts resulting from worsening economies in many states. Based on changes in state funding of public higher education from FY09 to FY10, 28 states appropriated monies that were 0.1 to 10.0% less, 10 more states appropriated monies that were 10.1 to 22.0% less, and 12 states appropriated the same or larger monies (Chronicle of Higher Education, 2011). These figures have improved by fiscal year 2012–2013, where 30 states increased their appropriations to higher education (Kelderman, 2013). Although these facts may imply an improvement in states' budgets and funding for higher education, the growing demands on states for K–12 improvement, healthcare reform, and other pressing concerns argue against such an interpretation. This more dim view of the future of higher education funding is supported by Moody's Investor Service (Kiley, 2013), which noted that all of the revenue streams that traditionally support higher education were undergoing pressure from economic, technological, and public opinion shifts. And these changes appear to be out of institutions' hands, forcing leaders to be more strategic and innovative in their efforts to improve institutional productivity, develop new markets and services, prioritize use of resources, and demonstrate value to those who fund higher education.

With more students and fewer resources, the productivity of higher education institutions has become of greater interest to state governments, national foundations, and other assorted groups. In a study of the effectiveness of states' performance-based funding programs, Tandberg and Hillman (2013) reviewed data on 25 states that have some version of performance-based funding for higher education institutions. These funding structures vary by the amount of the institution's budget subject to performance measures, the type of measures used, type of institution included, and the length of time the measures have been in operation. Despite findings that performance-based funding either affected outcomes after a long period of time (seven years) or had no effect at all (Tandberg & Hillman, 2013), several other states are exploring similar approaches to make funding of public higher education dependent on achieving state goals or productivity improvements. (One of these state goals has been increased access, which has fueled the interest in online learning.)

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Several state performance-based funding systems stress the importance of addressing higher education institutions' less-than-sterling retention and graduation rates. The first-year retention rate (from fall 2008 to fall 2009) was 71.9% for full-time students (42.5% for part-time students) at all institutions (National Center for Education Statistics [NCES], 2011a). For two-year colleges, the first-year retention rate was 60.9% versus 77.8% at four-year institutions. The graduation rates for cohorts beginning in 2001 were 36.4% (for those completing within the traditional four-year timeframe) for all four-year institutions versus 17.9% for all two-year institutions (NCES, 2010). For those from the business sector, these rates represent inefficiencies or waste on the part of the institution as well as for students. These rates are different at various colleges because they may serve populations that arrive underprepared for college work or have other unique challenges. This means that the criticism leveled at colleges for poor retention and graduation rates is not solely the fault of the college, and yet it is reasonable to ask colleges to find ways to improve these rates by investigating better methods of educating students and ensuring they graduate. Colleges, staffed largely with able and dedicated persons, certainly have the capability to improve themselves.

The issue of retention is of particular interest in online education as well. However, data on retention of online programs are neither clear nor consistent. Jenkins (2011), citing "countless studies," claimed success rates in online courses "of only 50 percent—as opposed to 70-to-75 percent for comparable face-to-face classes" (Jenkins, 2011, para. 3). Unfortunately, such claims as this one are common in the popular literature and show neither online learning nor face-to-face courses in a particularly good light. A recent email exchange on a listserv about online retention rates elicited more detailed responses from representatives of several institutions (Meyer, 2012a). The California Community Colleges and Broward College had online retention rates that were 7% below face-to-face retention rates, and Montgomery College had a retention rate for online and blended courses that was 4% lower than for face-to-face courses. Both Athabasca University and the North Dakota University System found that 85% of undergraduate students finished their online courses. In a recent study of managers of online education (WICHE Cooperative for Educational Telecommunications [WCET], 2013), online

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course completion rates were 3% lower than on-campus course completion rates (78% versus 81%). On the other hand, the University of Memphis has experienced the opposite phenomenon: Online courses have pass rates above, and failure and withdrawal rates below, students in on-campus courses. These figures present a situation where retention data for online courses are not as bad as some may think and may improve in the future as experience with designing and delivering online courses is gained.

However, retention rates in online courses can and should surely improve. But how is this to be accomplished? Fortunately, the research literature on campus-based education has thoroughly explored several retention theories—such as Tinto (1987, 1998), Bean and Metzner (1985), and Astin (1977, 1984, 1993a)—and documented evidence of how and when these theories help improve retention rates. These theories proposed, and found ample evidence for, the importance of getting students engaged in their collegiate surroundings—from participating in student organizations to engaging in conversations with faculty or becoming vitally interested in their studies—which encourages students to stay enrolled and get their degrees.

## Definitions

However, before reviewing the early literature around engagement, two definitions are needed to clarify the topics in this monograph.

### *Online Learning*

The history of student learning using the Internet has generated multiple terms for the phenomenon. Online learning has been referred to as a type of distance education and as web-based learning, e-learning, and online education. Its definition is further confused by referring to discrete portions of a traditional, face-to-face, or on-campus class conducted online; a hybrid or blended class that uses both face-to-face and online learning techniques; and an all-online course. Things are made more confusing when online learning is an online program, wherein a full degree program is offered through online courses. Unfortunately, writers often use the term they are most familiar with

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or that their campus prefers, so terms used in specific studies may be different although they refer to similar instructional structures.

For this monograph, “online learning” refers most often to the fully online course that has been designed to be offered over the Internet and uses web-based materials and activities (grading, discussions) made possible by various course management systems or other software packages. However, when discussing specific studies or authors, the term used in the given article or report is used to be consistent with the original author. The monograph also includes research conducted on blended models if the findings are pertinent to student engagement in the online portions of the class.

### ***Engagement***

Kuh (2009) defines engagement in this way: “The engagement premise is straightforward and easily understood: the more students study a subject, the more they know about it, and the more students practice and get feedback from faculty and staff members on their writing and collaborative problem solving, the deeper they come to understand what they are learning” (p. 5). This definition emphasizes how engagement results when the student’s involvement in learning (such as participating in a discussion or collaborating on solving problems) contributes to their learning and sustains their further involvement in course activities. The activities that have been found to be engaging in online learning are the focus of this monograph.

## **The Basis for Student Engagement on Campus**

Early research on college student outcomes benefited from Astin’s (1984, 1999) theory of involvement, which proposes that students learn more when they are involved in various academic and social aspects of the college experience. In other words, the more students engage in academic activities, participate in campus activities, and/or interact with faculty, the more they develop the skills and confidence to complete their education. This theory was based on Pace’s (1980) “quality of effort” concept that captured the student’s effort to use various college offerings (such as facilities and library resources) and

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led to several studies on the impact of student effort on retention and graduation (see Pascarella & Terenzini, 1991, 2005, for reviews of this literature). Early research studies also led to the development of Chickering and Gamson's (1987) Seven Principles for Good Practice in Undergraduate Education that include: (a) student–faculty contact, (b) cooperation among students, (c) active learning, (d) prompt feedback, (e) time-on-task, (f) high expectations, and (g) respect for diverse talents and ways of learning. These principles will have clear connections to the engagement literature to be reviewed in later chapters. The principles have also been widely applied to online learning (Chickering & Ehrman, 1996), perhaps suggesting that the principles of engagement for online learning are not so different from the face-to-face classroom. Nora (2003) developed a similar Student/Institution Engagement Model that emphasizes the various interactions between student and institution that create commitment to the institution because the student comes to see that he or she belongs there and recognizes the benefit that will accrue when the degree is completed at the institution. The model has been applied to students in web-based classes, and consistent results were found to those for students enrolled in more traditional formats (Sutton & Nora, 2008–2009).

The work of these early theorists and researchers led to the development of a number of early instruments intended to capture student experiences (the CSEQ or College Student Experience Questionnaire and the CCSEQ or Community College Student Experience Questionnaire). With the growing emphasis on the concept and importance of student engagement, a new instrument was needed.

## Results From the National Survey of Student Engagement (NSSE)

Although this monograph will address student engagement in online learning, it is important to recognize the role of the National Survey of Student Engagement (NSSE or “Nessie”) that was developed for the study of engagement on campuses and in traditional coursework and not online

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learning. NSSE is built on five benchmarks, briefly described as follows (Hu & McCormick, 2012):

1. Level of academic challenge (measures the extent to which colleges emphasize student effort and set high expectations), which includes questions about how many hours per week students study and the amount of reading or writing required in the courses.
2. Active and collaborative learning (measures student engagement with learning both alone and with other students), which includes questions on asking questions in class, making presentations, and working on group projects.
3. Student–faculty interaction (measures the extent to which students interact with faculty in and out of class), which includes questions on how often students discuss ideas with faculty or work with faculty on projects.
4. Enriching educational experience (measures several educational activities), which includes questions about interactions with diverse others and participation with learning communities, service learning, internships, and research with faculty.
5. Supportive campus environment (measures the quality of student relationships with peers, faculty, and staff), which includes questions that capture students’ perceptions of campus support.

The first four benchmarks can be clearly applied to the online course or program (and even a supportive campus environment can be done virtually), although specific items in the instrument may not be applicable to the online setting.

For example, depending on the specific item, NSSE-based research may be helpful in identifying engagement tactics for online learning, with some provisos, however. Although NSSE includes such items as “Discussed ideas from readings or class notes” under student–faculty interactions, it will have to be assumed that online students conduct this discussion either online or over the phone or Skype or other medium. However, under skill development, students may not be able to “speak clearly and effectively” in online courses unless, of course, a web-based system for capturing speech is used. These



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examples provide a useful insight into NSSE research: some items may provide a clue to possible tactics to increasing engagement in online courses, but other items may be based on a campus-based experience that assumes face-to-face instruction predominates and therefore may be less helpful to the online setting. The instrument may need to be modified so that the NSSE items apply appropriately to online learning (or develop a version of the NSSE items that specifically captures the online analogue of a campus-based activity) so that the NSSE can be helpful in identifying the level and sources of engagement for online students.

Although NSSE results are most frequently applied to traditional or on-campus students attending two- and four-year higher education institutions, a few studies have specifically looked at NSSE results for online students. For example, Robinson and Hullinger (2008) compared NSSE results for on-campus and online students and found that the online students scored higher on four benchmarks than first-year or senior students. The study also found several differences: by major (technology and management majors reported higher levels of engagement), grade point average (GPA; not surprisingly, students with A grades were higher in engagement), and age (with older students more engaged and especially in real-world discussions). These types of differences are critical when comparing NSSE scores of online to on-campus students because online programs often appeal to different kinds of students based on the content of the program. For example, many online programs prepare or upgrade professional skills and therefore appeal to adult, working professionals, and other online programs are directed toward teaching more basic skills as in general education coursework at a community college and may appeal to younger, more traditional-age students. In other words, to the extent that NSSE results can be broken down to capture subgroup differences, they are more valuable for helping an individual online program understand how well it engages students and improve its engagement strategies for the future.

Chen, Lambert, and Guidry (2010) used NSSE data to tell a different story about engagement for students using various types of technologies (the sample included students who were in web-only, blended, and face-to-face classes and various combinations thereof). The results suggested that even after controlling for a number of individual and institutional characteristics,

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a positive correlation was found between the use of technology and measures of engagement. This finding is consistent with prior studies using NSSE data to explore technology issues (Hu & Kuh, 2001; Kuh & Hu, 2001; Nelson Laird & Kuh, 2005). In other words, some use of technology may have a positive impact on engagement.

In a study using the Community College Survey of Student Engagement (CCSSE) that includes items developed for online study, the students in web-only courses were less engaged than students in blended classes (Fisher, 2010). However, the lack of engagement was attributed less to the online setting and more to students not experiencing active and collaborative pedagogies, interacting one-on-one with faculty, or experiencing social and academic support. Fisher (2010) is an excellent introduction to the contents of this monograph because it clarifies that the problem of engagement (or learning or retention) cannot be attributed solely or exclusively to the online setting, but to the lack of appropriate pedagogical choices that include the kind of learning activities that seem to encourage student engagement in online learning.

## Importance of Online Learning

Online learning has become one of many tactics that higher education institutions have adopted to address the many challenges of static budgets, increasing access, and improving productivity. Enrollments in online courses and programs have exploded in the past two decades, growing to 6.7 million students in fall 2011 (Allen & Seaman, 2012); this is approximately 30% of all higher education enrollments in fall 2011 (NCES, 2012). Indeed, research conducted by Allen and Seaman (2012) on 2,820 higher education institutions found that 32% of all higher education students take at least one online course. This means that the collegiate environment for many students is online. These students are not only enrolled in the online course or online degree program, but they are participating in a wide range of web-based academic and student services that support both online and on-campus students. In other words, the online experiences of students can and do matter a great deal and can help higher education institutions improve in ways sought

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by society at large. Therefore, finding ways for online students to become and stay engaged in their courses and educational programs is important.

Online students are no longer an amorphous and unclear group that institutions may not know about or understand. Aslanian and Clinefelter (2013) surveyed 1,500 online students and found that 65% and 72% agreed completely that their online education was a worthwhile financial and time investment, respectively. Most were undergraduates (with 13% earning certificates, 3% working on licensure, 21% working on associate's degrees, and 27% on bachelor's degrees), but graduate students were also well represented (32% were enrolled in master's degree programs and 4% in doctoral programs). Business is the most popular program at the undergraduate and graduate levels, only 5% have tried MOOCs (Massively Open Online Courses) and 4% enrolled in one but dropped out, 65% are in not-for-profit institutions, and 47% are enrolled in an online program offered by an institution relatively close to them or less than 50 miles away. More interestingly, many are dedicated online students: 44% indicated that they did not consider enrolling in hybrid or campus-based programs. They are experienced as well: 44% had taken an online course before. Students choose learning online due to the flexibility it offers and the need to manage multiple responsibilities. These students are also predominantly older: 56% of all distance education students in 2007–2008 were over age 24 (NCES, 2011b). In other words, these are primarily adult students who are interested in learning online, choose online programs for particular reasons, and are likely to know what they are getting into.

## Relevance of Monograph

The focus of this monograph is to review the theories and published research about student engagement in online learning and address a number of questions about student engagement that are particularly relevant to several audiences. First, faculty will be interested in learning new techniques for improving student engagement in their online courses, testing some of the techniques, and sharing their results with their peers in published research articles or conference presentations. Second, course designers (who certainly

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may include faculty) will also be interested in learning which techniques have been studied and what results have been documented so that they may choose the most effective or appropriate engagement technique in online courses. Third, academic leaders—who may be at the chair, dean, provost, or presidential level—may wish to learn more about engagement in the online setting so they can help online programs increase student engagement, learning, and retention. Fourth, those leaders directly responsible for online learning operations—be they in Continuing Education or Extended Programs—may find some of these techniques and research findings worth sharing with the faculty and program directors of online programs. Lastly, students of online learning—be they graduate students or instructors who wish to improve what they do—will be interested in reviewing the state-of-the-art research on student engagement in the online setting and perhaps undertake future studies that will develop our understanding of how to do online learning well.

Please note that the terms “faculty” and “instructors” are used throughout this monograph in a largely interchangeable fashion. However, if the original study being discussed referred to faculty, then that term is used. If the discussion is more general and would apply to instructors at all levels (including the community college and university), then the more inclusive term is used.

Also, the emphasis of this monograph is on the pedagogies, activities, and learning theories that impact student engagement in online learning rather than on specific technologies or software programs or web applications. The intent is to provide readers with instruction-based guidance not tied to a specific product that may soon be replaced by a new technology or program.

## Organization of Monograph

Rather than conduct a review of research by topic, this review of research is approached as if an instructor or course designer were asking questions about what works and why. Each chapter begins with a question that is answered as thoroughly as present research knowledge allows.

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The second chapter answers the question, “What theories help explain student engagement in online learning?” The chapter presents several theories and explains their importance to engagement in the online setting, whether the theories were developed for online learning or more traditional forms of education.

The third chapter answers the question, “What techniques for student engagement should be considered by the online course designer or instructor?” This chapter is the longest chapter as it first presents basic strategies based on the early work of Moore (1989, 1990), who stressed the importance of interaction of certain types (with faculty, content, and other students). Then the chapter presents a range of pedagogical approaches for achieving student engagement in online learning, grouping them by type, and discussing the research done on them.

The fourth chapter answers the question, “What effects have been found for online student engagement?” It presents the research that has been done that specifically investigates the impact of engagement on a variety of outcomes. Given the state of this literature, the chapter will also outline the kinds of research that need to be done in the future to better understand what can be gained by deploying various engagement techniques.

The fifth chapter answers the question, “Are there limits to student engagement?” This section discusses the reasons why some problems may never be overcome by the engagement efforts of higher education institutions and why 100% engagement, or 100% retention, may be unachievable or highly unlikely.

The sixth chapter answers the question, “What can we conclude about how to increase student engagement in online learning?” This final chapter attempts to summarize the findings across all of the chapters into general propositions about student engagement online and outline the remaining research questions that need attention by researchers interested in studying student engagement in online learning.

The monograph is organized to push the analysis of engagement in online settings from a more general and theoretical basis to more specific and research-based insights. Readers needing different types of information (relevant theories of instruction, research results, and specific engagement

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tactics) can find useful information in a particular chapter. Therefore, a certain amount of repetition is built into the approach as later chapters are built upon the material in earlier chapters.

This monograph is intended to provide specific approaches to increase student engagement in online learning, and also provide broad advice about what works and why so that new ideas may be assessed against these early findings. If this monograph is successful, it will invite a new generation of researchers to the study of online learning, and energize instructors, designers, and institutional leaders to adopt, test, and improve upon what the field knows about student engagement and online learning.

## Summary

This chapter provided an overview of the various challenges facing colleges and universities that explains why online learning has been adopted by many higher education institutions as a way to increase access and improve productivity. After a short review of engagement theory and the NSSE instrument, it becomes clear why student engagement in online learning has been promoted as a way to increase student retention in online coursework, which can help institutions produce more college graduates. However, engagement in online learning focuses more on what is happening in the course or degree program than all of the activities or services offered by an institution.