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A Research Review about Online Learning: Are Students Satisfied? Why do Some Succeed and Others Fail? What Contributes to Higher Retention Rates and Positive Learning Outcomes?

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Abstract
What are the foundations of student satisfaction or dissatisfaction with online courses? Why do online learners succeed and others fail or drop out? What kind of instructional designs, pedagogical practices, and administrative standards contribute to the development of effective online courses with high retention rates and positive student learning outcomes?

Plenty of valid, well-researched information and literature reviews, along with abundant data accumulated through student/faculty surveys and online learning course evaluations, are outlined and summarized inside numerous academic papers that attempt to answer such questions.

This report is based on the author's search and analysis of numerous scholarly academic papers that addressed such questions and were published between 2004 and 2007.

KEY WORDS: student satisfaction; online learning; distance education; retention rates; learning outcomes

A Word About Sample Size

A good number of papers that were examined for this report relied on very small samples as the basis of their findings, ranging from a very in-depth paper on students' perceptions of online education based on interviews conducted with three students (Yang and Cornelius 2004); to an informative paper based on the qualitative descriptions of six professors and seven students' attitudes, perceptions, and experiences of online learning in a College of Education (Lao and Gonzales 2005); to a deep examination of the dynamics of online discussions and their relationship to student learning outcomes in an online graduate-level English grammar class comprising 15 students (Ho and Swan 2007). However, these types of papers, which were based on relatively small samples, are not the focus of this report. Instead, the findings synthesized and presented in this report are based on studies that garnered responses from a minimum of 60 to more than 1,000 online learners.

Numerous Factors

It also needs to be noted that it is very difficult to speak singularly about online learning, as there are numerous factors within different disciplines and course and program environments, along with unique and varied dynamics pertaining to student demographics and psychographics, instructional design and pedagogy, and much more, that reveal a wide variety of learning outcomes and student perceptions and levels of satisfaction concerning online teaching and learning.

Stating the Obvious

In addition, much of the research reveals an over supply of redundancy, with common-sense notions about teaching, learning, and access presented as interesting or new discoveries. Repeatedly, for instance, it is proclaimed that students are satisfied with online learning because it is flexible and convenient, especially for busy, working adult learners. Plus, obvious notions about students being self-directed and motivated to learn too frequently come up as primary reasons for a student's satisfaction with his or her online learning experiences, as well as their overall success as learners.

However, as Morris, Finnegan, and Wu point out, even with this overemphasis on the obvious, a review of the literature concerning student satisfaction and dissatisfaction, and effective pedagogies and course designs, in online learning environments, can certainly be helpful.

Such studies provide a necessary basis for understanding the complex interactions between students, faculty, course materials and course structures. As more institutions offer online courses to handle burgeoning enrollments, and as students increasingly expect alternatives to face-to-face courses, it becomes imperative to understand what constitutes and encourages successful student behavior in this environment (Morris, Finnegan, and Wu 2005).

To support the aforementioned, Morris et al. admittedly point out that the results of their research—from a study they conducted on a relatively large population of 423 students enrolled in 13 sections across three fully online courses—are quite obvious but necessary. They note, for instance, that 137 withdrew from their online course because they "were not sufficiently motivated to engage in online learning tasks to complete the course;" 72 were non-successful completers because they "were far less active in participation than successful students;" and 214 were successful completers because they "engaged in online learning activities with greater frequency and greater amounts of time than unsuccessful, withdrawing students" (Morris, Finnegan, and Wu 2005).

Seven Factors That Drive Student Satisfaction

In addition to the point of view that online learning provides primarily adult learners with a convenient and flexible environment to gain knowledge and earn a higher education credential for career and personal advancement, there are many other elements of online courses that generate satisfactory results among students.

Sun et al. (2007) identified the following seven critical factors that influence online learners' satisfaction based on 295 responses from students enrolled in 16 different online learning courses at two public universities in Taiwan: computer anxiety, instructor attitude, course flexibility, course quality, perceived usefulness, perceived ease of use, and diversity of assessment.

Sun et al. explain that "not surprisingly," course quality is the most important concern and that technological design plays an important role in students' perceived usefulness and ease of use of a course. Additionally, Sun et al. claim that the assessment strategy of any online course should include student and/or peer assessment in addition to the instructor's evaluations of student performance.

Instructor Attitude and Selection

The Sun et al. study also found that instructors attitudes toward e-Learning positively influence students' satisfaction. When instructors are committed to e-Learning and exhibit active and positive attitudes, their enthusiasm will be perceived and further motivate students. In light of this, school administrators must be very careful in selecting instructors for e-Learning courses (Sun et al. 2007).

A similar notion about selecting instructors was mentioned in a feature article in *Recruitment & Retention*. A distance educator at Boise State University explained that her research about online learning revealed that students frequently complained about having an unengaged or uninvolved instructor as a reason for their dissatisfaction. Solutions could be addressed as early as the faculty hiring process by selecting instructors who like to communicate with students online and by informing new faculty of the increased time demands that typically accompany teaching online (Magna Publications 2005).

Instructional Factors

In a recent study conducted by Lim, Morris, and Kurpitz, the learning outcomes of online and blended learning delivery methods were compared. One hundred twenty-five undergraduate students in a program evaluation course at the University of Tennessee, most of whom were majoring in Human Resource Development, completed a close-ended and open-ended questionnaire that was written in a language that was familiar to the learners using terminology taught in the course. Among the 125 students, 59 were enrolled in an online course and 69 were enrolled in the same course taught in a blended modality. Sixty-seven percent of these students were between 18 and 19 years of age. Data analysis revealed that the course format did not affect students' learning application to any significant degree. However, within the two groups, various instructional activities were deemed more important than others. In particular, group and individual projects, discussions and class assignments facilitated the most learning.

This finding has implications for the importance of learning application for greater learning satisfaction and increased learning regardless of the different instructional formats. That is, learners seemed to value those learning activities that they could apply learned knowledge and skills to personal situations more than merely understanding instructed learning content in both online and blended learning environments (Lim, Morris, and Kupritz 2007).

A variety of instructional factors can play a vital role in whether or not students, in general, are satisfied with online learning and/or are actually learning anything.

Virtual Teams and Collaborative Learning

Shen, Hiltz, and Bieber presented results of a field experience of virtual teams that took online examinations. Using data collected from 485 students, Shen et al. indicated that collaborative examinations enhance interactions and the sense of an online learning community, resulting in significantly higher levels of perceived learning and student satisfaction. These collaborative exams were facilitated through online asynchronous conferences in which anonymous students and the instructor discussed the exam design, questions, and grades. The conferences allowed students to share ideas, reflect on others' ideas, and collaborate whenever they wanted to. Shen et

al. observed that, consistent with other studies related to collaborative learning, virtual teams taking online examinations experience increased involvement with course materials and with each other. Additionally, such collaborative systems facilitate problem solving and higher levels of critical thinking (Shen, Hiltz, and Bieber 2006).

Feedback, Communication and Rewards

In another paper—based on a study of 125 undergraduate online learners—that had a focus on instructional factors, it was pointed out that motivating online learners, and keeping student satisfaction at healthy and productive levels, can be accomplished by providing timely and frequent feedback to students; facilitating alternative communication experiences through such mechanisms as live chat and audio/video conferencing; and rewarding students with devices other than grades, such as by sharing accomplishments among peers (Lim). Additionally, the authors of this study called for instructional designers and instructors to pay closer attention to utilizing motivational strategies that result in a more outcome-oriented online instruction (Lim, Morris, and Yoon 2006).

Online Learning Design Issues

The authors also listed the following factors, some of which were related to instruction, and were referred to as "issues in online learning design," that help facilitate meaningful learning engagement and learner satisfaction:

    —A reliable and fail-safe technology system.
    —Clear guidelines for class assignments and faculty feedback.
    —Appropriate technology standards to deliver instruction.
    —Meaningful learning experiences to demonstrate students' ability of analysis, synthesis and evaluation of learning content.
    —Facilitated interaction among students and between students and faculty.
    —Facilitation of student self-motivation and commitment.
    —Access to adequate technical assistance and orientation prior to the course (Institute for Higher Education Policy 2000).

About Retention Rates

Of course, a satisfied online learner most always and logically means that he/she will stay committed for the full duration of a course or a program.

    Meyer, Bruwelheide, and Poulin wrote a paper that included a literature review on three theories of online student retention. The literature review section of this paper was a prelude to their exploration of why 60 out of 62 students completed or remained enrolled in a 21-credit, seven-course online certification program in library media offered by Montana State University-Bozeman (Meyer, Bruwelheide, and Poulin 2006).

    The first theory is "Tinto's Model," which posits, in part, that a student's involvement in peer-group interactions affects his or her commitment to their course of study and ultimately a full and meaningful integration into an institution (Tinto 1998). Tinto's model is one of the most widely accepted models for attrition and has been known to be responsible for the creation of learning communities and Freshman Interest Groups in higher education (Rovai 2003).

The second theory is based on the work of Bean and Metzner, who, in contrast to Tinto, describe non-traditional students over the age of 24 who are not influenced so much by peer interactions or social integration as they are by the encouragement they may get from friends, employers, and family, as well as from the utility of education they have enrolled in (Bean and Metzner 1985).

The third theory is called "Community of Inquiry" and is based on the work of Garrison, Anderson, and Archer, who combined three constructs: social presence, teaching presence and cognitive presence. The authors note, however, that these constructs are more of a learning model than a retention model, per se (Garrison, Anderson, and Archer 2000).

Social presence is the ability of students and faculty to project themselves socially and emotionally. Teaching presence is the binding element to creating the Community of Inquiry and includes developing, managing, and facilitating higher-order learning. Cognitive presence is the process of knowledge construction or critical thinking and moves from perceiving through exploration to integration and resolution (Garrison, Anderson, and Archer 2000).

Why Students Drop Out

Meyer et al. also mention several studies on why students drop out of online learning, referring to a Willing and Johnson study in which students' reasons for dropping out of online courses were no different than in the face-to-face environment (Willging and Johnson 2004). A study of an online MBA program found that online courses such as accounting and business statistics had higher attrition rates than on-campus courses (Terry 2001). Another study concluded that many students drop out of online courses because they simply were too stretched with work and family responsibilities to devote enough time to their classwork (Diaz 2002).

Why Students Stay

Regarding the study of the online certification program and its near-perfect retention rate, Meyer et al. found that the flexibility, convenience, and the relevancy of the program to their careers and job were what initially attracted students to this program.

What keeps these students enrolled are various qualities of the faculty, the quality of the coursework, and personal reasons. Perhaps one can tentatively conclude that while it is the online nature of the program that lures a student to enroll (and allows them to stay enrolled), it is the nature of the relationships with faculty, the quality of the educational experience, and their own personal and individual reasons and motivations that keep them enrolled (Meyer, Bruwelheide, and Poulin 2006).

The Importance of Student Services

Providing effective, professional, and sufficient student services are also very important elements that help keep students motivated, satisfied, and enrolled in online learning courses and programs. In particular, two areas of high concern in relation to student services were noted in a paper based on a study of 272 online degree-seeking students from six higher education institutions: bookstore services and academic advising.

While online vendors such as Amazon, Barnes, and Noble, and other booksellers often provide fairly decent and adequate services for students to purchase the textbooks they need for

their online courses, the study found that students preferred to purchase books directly from their institution's bookstore. The study noted that research about bookstore services has not surfaced in the literature about student services, but their study suggested that "online learners perceive these services as a critical part of their experience in relation to other student support services (Raphael 2006)." In relation to academic advising, "clear, complete and timely information regarding curriculum requirements," was the student service deemed most important to students.

In particular, 48.5% of the participants in this study reported that they had completed less than 30 hours towards their degree at the time of survey completion. Students at the beginning of a degree program typically require more intense advising than students further along in the process. These busy individuals hope to enroll in courses that will lead them down their desired paths. They also want to be sure that the degree they seek provides them the training, experiences, or knowledge needed to meet their goals. Without solid academic advising services, online degree seekers inevitably flounder at some point during their distance education experience (Raphael 2006).

In a study conducted by the Alliance for Higher Education Competitiveness with 21 institutions who described themselves as being successful in online learning, student services tied for third as one of the most important factors in achieving success. In particular, this study noted:

Course materials must be available and easy to use, and students must have someone to call when they need technical help. A new trend was to establish a contact point for resolution of any student issue. This individual went by many names, such as program coordinator or advisor (Abel 2005).

Additionally, providing a host of student services in an online modality is a trend that is growing in usage at institutions. At Syracuse University, for instance, a separate online account for student services is available for all online students. The account includes an online student services-oriented course that includes informal online academic and career advising services conducted through live chats and asynchronous discussion forums, a textbook swap service, and registration information. A student services staff member monitors the course and answers questions posted by students. Faculty and other staff are also enrolled in the course and participate in discussions. Administrators of this service say that it has increased communication on all levels and has helped to increase a sense of community among students, faculty, and staff (Dah 2005).

Another student service that can be considered vitally important revolves around providing effective online orientation courses to new online learners. At Portland State University, for instance, effective online orientations include the following components:

—Stress what kind of technical support is available and how to use it.

—Include information about developing time management skills, especially for adult learners who have busy schedules.

—Extensive review and practice on how to communicate effectively in the online environment (Educational Pathways 2005).

The Big Picture
When looking at the overall landscape of online teaching and learning, Muilenburg and Berge wrote a very interesting and important paper based on a large scale (*n*=1,056) exploratory factor

analysis that explained and defined student barriers to online learning. In short, they came up with eight barriers/obstacles/factors:

—Barriers that administrators and instructors control.
—Obstacles to online learning caused by a lack of interaction.
—Obstacles to online learning caused by a lack of academic skills.
—Obstacles to online learning caused by a lack of technical skills.
—Factors related to learner motivation.
—Factors related to time and support for studies.
—Factors related to cost and access to the Internet.
—Obstacles caused by technical problems (Mulienburg and Berge 2005).

Another interesting and important report that had a big-picture theme was based on an EBSCO database review of scholarly articles that focused strictly on online instruction and were published between 1999 and 2004. The researchers for this report used "online instruction," "student satisfaction," and "distance education" as their most productive search strings. From this review, six subtopics were identified:

—A comparison of online instruction to face-to-face instruction.
—Evaluation of online courses.
—Reasons students choose online courses.
—Contributors to student satisfaction.
—Predictors of student satisfaction.
—Course design and implementation considerations (Johnston, Killion, and Oomen 2005).

The reasons why students choose online courses were listed as flexibility, convenience, and access to a course. Online distance education was their preferred learning style, e.g., shy students have a voice online and feel more comfortable participating in the online environment, and other students enjoy working at their own pace to better understand material being taught. It was also noted that some students sign up for online courses because they have the wrong perception that such courses may be easier, when, in fact, they are most always equally or more challenging than traditional face-to-face courses (Johnston, Killion, and Oomen 2005).

The contributors to student satisfaction were noted as positive and effective contact and interaction with the instructor, clarity and relevance of assignments and communication, access to campus-based resources, availability of technical support, and orientation to the course and its use of technology. Additionally, "the ability of students to interact with each other reduces the feelings of isolation and improves satisfaction" (Johnston, Killion, and Oomen 2005).

The predictors of student satisfaction were strongly related to interaction with faculty and peers. Other predictors included "timely comments, variety of assessment, and students know how they will work with groups and teams to be statistically significant predictors." Also, an extroverted personality type was said to be a valid predictor of student satisfaction (Johnston, Killion, and Oomen 2005).

The Independent, Self-Directed Learner
Despite many common notions about positive interaction with other students being a key driver for student satisfaction in the online learning environment, there is another category of student who prefers to study and progress through a distance education degree program independently. This student type is typically an adult learner in his or her middle to late 30s, or older, who is

self-directed, disciplined, and does not find it necessary, nor has the desire, to engage in fully online classes with other students.

Western Governors University (WGU) is a prime example of this through its distance-education, competency-based degree offerings. WGU started offering its unique brand of distance education in 1999 and today has more than 8,000 students with an average age of 38. Its competency-based model awards degrees based on their students' ability to pass assessments. Students earn competency units towards earning a degree after meeting specific learning goals and passing the appropriate assessments.

Every WGU student is assigned a mentor who is a professional one-on-one academic counselor that, in addition to providing advisement services and information about WGU policies and procedures, also provides content-related support as students prepare for their assessments. To help them with their studies, WGU students are also provided access to instructor-led online courses from other institutions, independent-study e-learning modules from various commercial enterprises, the appropriate textbooks through the WGU bookstore, and the wide and varied number of important information resources available online through the WGU central library system.

It is interesting to note, however, that the instructor-led online courses are not the primary study resource for the typically successful student at WGU.

Ironically, the most successful students in the WGU Teachers College, according to Janet Schnitz, executive director of the Teachers College, are those who work well with accessing and utilizing the many independent learning resources that WGU provides, not the students who rely on taking the instructor-led online courses offered by institutional partners.

"We find that the students who rely on online courses are usually the weaker students, and they also need more guidance and support," says Schnitz. "The students who work with our independent learning resources and our mentors seem to do much better in the programs we have to offer." Schnitz adds that many students come into WGU "being field dependent," and, over time, become "field independent" and more able to basically build their own educational pathway (Educational Pathways 2007).

Conclusion

As explained throughout this report, there are numerous factors to take under consideration when attempting to define or pinpoint exactly what makes an online learner satisfied, motivated, and ultimately successful.

Just like in the traditional face-to-face environment, unique circumstances surround every learner, every instructor, every course, every department, every program, and every institution. So, logically speaking, an effective path to take for building any successful online learning course or program—one in which students are satisfied and do not drop out—requires, at the very least, a focus on the individual student to a position in which his or her educational needs, skills, access, and personal circumstances are identified. Then, based on this thorough identification, the appropriate levels of advisement, content, and interaction must be consistently applied to the student's course of study throughout his/her online education experience.

About the Author

George Lorenzo is a Senior Writer and the Editor-in-Chief at The SOURCE on Community College Issues, Trends & Strategies.

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