# STUDENT MOTIVATION IN THE ONLINE LEARNING ENVIRONMENT

#### Cheng-Yuan (Corey) Lee

Dectoral Student
Instructional Systems, College of Education
University of Central Florida
Orlando, Florida, U.S.A.

#### Abstract

Although online learning is gaining immense popularity and attention during the past few years, it has a problem of a high drop-out rate. Motivation of online students is problematic and often overlooked. Based on a review of literature on distance education and motivation theory, this article attempts to identify several factors that affect student motivation in online learning environments. These factors include geographical separation, text-based and asynchronous communication, intensive technology skills requirements, hypermedia and the Internet, course content and learning activities, and support services. After each factor is identified, considerations and suggestions are provided.

#### Keywords:

Motivation; Online learning; Internet

#### Introduction

Due to the development of information and communications technologies over the last decade, the World Wide Web (WWW) is empowered with many advanced features, such as rich displays (presenting visual, auditory and symbolic formats at once), high levels of real time interactivity, and a high degree of learner control. Given the advantages of the WWW, an increasing number of educational institutions are offering online courses to reach a larger student population.

Although online learning is gaining immense popularity and at-

367

tention, it has its problems—the high drop-out rate of online students. Online learners throughout the world are characterized as having a higher attrition rate than traditional students. The motivation of online students seems problematic. To date, there are few articles discussing online learning from the viewpoint of motivation. Based on the review of literature on distance education and motivation theory, this article attempts to identify factors that affect student motivation in the online learning environment. In addition, some considerations and suggestions are provided.

#### **Geographical Separation**

The most obvious characteristic of online learning is that the instructor and students are geographically separated. Unlike the traditional face-to-face (F2F) instructional mode, online learners are unable to see their instructors on a weekly basis; they are separated by both space and time. Due to the separation, students often report a lack of social contact and feel isolated from their instructor and peer. This poses serious problems in student learning and motivation. According to Rotter's social learning theory, "the major or basic modes of behaving are learned in social situations and are inextricably fused with needs requiring for their satisfaction the mediation of other persons." This notion is proved by Peter's study<sup>2</sup>, in which the lack of social contact with other students accounts for 27.3% of the reasons for dropout. Lockett's study<sup>3</sup> also shows that when students socialize with their peers, they are less likely to drop out and are more likely to maintain high levels of motivation. Understanding this, the social aspect in student learning and motivation should not be ignored.

To increase social contact in the online learning environment, a collaborative learning method is often adopted. Collaborative learning approaches require students to interact with one another. This can increase the interactivity levels among students. If students are more engaged in their learning activities, they feel they are a part of an academic group; thus their feeling of being isolated can be reduced. In

addition, researchers also found that when a learning task is accomplished, students who participate in teamwork raise their self-esteem higher than students who work independently.<sup>4</sup>

# Text-based and Asynchronous Communication

Online communications are predominately conducted through email and forums, which are text-based and asynchronous. The text-based and asynchronous nature of online communication raises two problems related to student motivation. First, it requires online students to communicate through writing, which might be distressing for those students who do not have the ability to express themselves effectively in writing. Second, asynchronous communication often creates an uncertainty among students. While the asynchronous nature of online learning allows students and instructor to communicate at their convenience, feedback from the teacher is often absent or delayed. When students are concerned about their performance, but cannot obtain feedback from their instructor, they are in the midst of uncertainty. This uncertainty eventually leads to feelings of heightened anxiety.

These engative feelings experienced by many online students cannot be neglected. As an increasing number of research studies indicate, emotion has a significant impact on human motivation. Negative emotions, such as anxiety, sadness, depression, and anger, have negative effects on motivation, whereas positive emotions, such as happiness, joy, and contentment, have positive effects on motivation. To ease students' discomfort rising from text-based communication, showing an instructor's empathy is helpful. Meanwhile, the instructor can encourage students' through written communication to help them overcome their discomfort and fear with written communication. To reduce the students' anxiety levels resulting from the use of asynchronous communication, it is suggested that the instructor respond to student messages frequently. When it is not possible to respond to student messages in detail, a simple short message, such as "received", can help eliminate anxiety.

## **Intensive Technology Skills Requirement**

Participation in online learning involves the intensive use of technology. To succeed in such courses, students should be able to use communication technologies to access course materials, send and receive email, browse the Internet, and perform searches to locate information. However, not every student taking an online course has sufficient prior technology experience. Due to inadequate computer experience and skills, novice computer users often suffer from computer anxiety.<sup>6</sup> While students are experiencing computer anxiety, they are not able to focus their attention on the learning activities or tasks because their working memory is occupied by the fears of computing. To avoid this anxiety, especially at the beginning of a semester, the instructor can spend additional time dedicated to helping students gain comfort and expertise, and reinforcing initial attempts at communicating online.<sup>7</sup> With additional efforts contributed by online instructors, students will feel more comfortable and confident with the communication technologies.

## Hypermedia and the Internet

A salient feature that distinguishes online learning from the traditional learning format is its use of hypermedia. Hypermedia is a framework for nonlinear representation of symbols (graphics, text, images, code) in the computer.<sup>8</sup> The nonlinear presentation of information allows the hypermedia learner to randomly access a body of knowledge in their preferred manner. This capability of hypermedia grants the user a certain degree of control over their learning and requires more mental effort. According to motivation theorists, allowing the students choice and control in their learning activities enhances their intrinsic motivation.<sup>9</sup> However, there is a pitfall associated with the use of hypermedia. Researchers have discovered that, due to the richness of information stored in hypermedia nonlinear environments, it is easy for the user to wander off along various paths, loose track of where she/he has been, and become disoriented within the information net.<sup>10</sup> This may cause

confusion, stress and frustration in learners, deminishing their intrinsic interest in learning. To prevent this downside of hypermeida, Morariu suggests that "learners must be provided with appropriate and clear nagivational and conceptual tools in order to explore even the best-designed systems."

Many studies show that when the Internet is used as a resource for additional information, students are motivated to learn content in greater depth because it offers them resources beyond their classroom, more current than their textbook, and more knowledgeable than their teacher. 12 For this reason, in most online courses, use of the Internet provides an excellent resource for additional course content. At the same time, the Internet may also become a major source of distraction because of the abundance of information located. Frequently students report that they are easily distracted by the interesting, but irrelevant information on the web while they are searching for assigned information. These distracters have a negative impact on student motivation because the learner perceives being distracted as a sign of lack of control over outcomes. 13

## **Course Content and Learning Activities**

Probably the most important factor that motivates people to take an online course is to gain additional knowledge and qualifications. The ultimate goals of online students often include one or more combinations of these reasons: to upgrade existing qualifications at work, to increase the likelihood of higher salaries, to improve promotional prospects, and to enhance employment opportunities. When learning tasks can help them achieve their goals, they commit more strongly to the learning tasks. As Knowles states, "When learners understand how the acquisition of certain knowledge or skills will add to their ability to perform better in life, they enter into even more didactic instructional situations with a clearer sense of purpose and see what they learn as more personal. It converts course takers and seminar participants into competency developers." Understanding this concept while preparing course material, the instructor should try to make them as relevant as possible,

in order to maintain and enhance student motivation.

Besides course content, learning activities have significant influence on student motivation. A learning activity frequently used by online instructors is the use of a problem solving approach. This has proved effective, not only in developing students' critical thinking skills and deepening their understanding of significant content, but also in increasing a studnets' motivation. 15 A problem solving approach has three attributes that contribute to increased student motivation. First, problem solving requires that learners obtain sufficient skills and knowledge to perform the problem-solving task. Once the problem is solved, it conveys to learners that they are becoming more competent, which will raise self-efficacy and perceived control over outcomes. Second, problem solving prompts a student's intrinsic motivation by triggering their imaginations. It is said that with fantasy, students gain vicarious pleasures that are not usually available to them. Third, problem solving encourages students to use knowledge meaningfully. For most students, using knowledge meaningfully is challenging and intrinsically motivating.16 Embeded with learner control, fantasy, and challenge, problem solving strategies enhance student's intrinsic motivation for their study.

#### **Support Services**

While online students are physically separated from their instructors, to some extent, they are also separated from support services. Online students, like on-campus students, need support, such as library services, to complete assigned projects or studies. However, most of the time, library services are not available to those who cannot physically visit the campus library. Online students often feel frustrated due to the constraints of unattainable service, which will hinder students' intentions to complete their tasks.

Besides the lack of library services, another constraint stems from the lack of technological support. Computer technologies and networking are the predominant media used in online learning. Whenever there are communication breakdowns and technical difficulties, online students are blocked from access to course material or to contact with their instructors. At this moment, support services should be available for online students. However, many institutions fail to provide these services. This technological obstacle can easily frustrate online learners, thus preventing them from participating in learning activities. Evidence indicates that technological problems are often cited as the most frequent cause of course deficiencies, student anxieties and frustration, negative attitudes toward the course, and student dissatisfaction.<sup>17</sup>

In motivation theory, the lack of library services and technical support is defined as an environmental constraint. According to Ford's motivational systems theory, an environmental constraint will hinder an individual from performing a task, and eventually reduce the level of motivation. If examined further, these environmental constraints actually convey to the learner a loss of control. According to Expectancy-Control theory, people who have a lower degree of sense of control of the learning or task tend to withdraw their commitment from the task in which they are engaged. As a result, Ford proposes that the learning environment should contain the material and information resources needed for task completion. Therefore, it is important to provide sufficient and timely services, such as library services, technology helpdesks, administrative support, advising, and counseling to remove environmental constraints that hinder online students' commitments.

#### Conclusion

Participation in an online learning environment is definitely different from the conventional, face-to-face classroom format. Due to the geographical separation, intensive use of communication technologies, different learning assignments and activities, and different communication skills required, online learners are facing many changes that are essential to a successful learning experience. To many students, these differences and changes from their prior experience are stressful and frightening. As many studies indicate, trying something new typically

produces feelings of discomfort, confusion, tension or anxiety. 19 Eventually, these negative feelings hinder students' motivation in successfully completing learning tasks and activities. However, sometimes some changes are necessary for success. Understanding student motivation can make this transition more comfortable and even more enjoyable.

#### Notes

- 1. J.B. Rotter, Social Learning and Clinical Psychology (New York: Prentice Hall, 1954).
- O. Peters, "Some Observations on Dropping out in Distance Education," Distance Education, 13: 2 (1992): 12-21.
- 3. K. Lockett, "The Loneliness of the Long Distance Learner: Using on-line student support to decrease the isolation factor and increase motivation," *Proceedings of WebNet98 World Conference of the WWW, Internet & Intranet* (Association for the Advancement of Computing in Education, 1999).
- R.E. Slavin, Cooperative Learning: Theory, research, and practice (Englewood Cliffs, New York: Prentice-Hall, 1990).
- 5. M. Boekaerts, "Being Concerned with Well-being and with Learning," Educational Psychologist, 28: 2 (1993): 149-167; G.H. Bower, "Emotion and Social Judgments," Monograph published by the Federation of Behavioral, Psychological and Congnitive Sciences as part of the Science and Public Policy Seminars, Washington, D.C., 1995; and M.E. Ford, Motivating Humans: Goals, emotions, and personal agency beliefs (Newbury Park, CA: Sage Publications, 1992).
- B.H. Loyd, & C. Gressard, "The Effects of Sex, Age, and Computer Experience on Computer Attitudes," AEDS Journal, 18: 2 (1984): 67-77.
- D.H. Hantula, "The Virtual Industrial Organizational Psychology Class: Learning and teaching in cyberspace in three it@rations," Behavior Research Methods, Instruments, & Computers, 30: 2 (1998): 205-216.
- C. Dede, "Empowering Environments, Hypermedia, and Microworlds," The Computing Teacher, 14
   3 (1987): 20-24, 61.
- R. de Charms, Personal Causation: The internal affective determinants of behavior (New York: Academic Press, 1968); and E.L. Deci, The Psychology of Self-determination (Lexington, MA: D.C.Heath, 1980).
- 10. R.S. Heller, "The Role of Hypermedia in Education: A look at the research issues," *Journal of Research on Computing in Education*, 22: 4 (1990): 431-441; and G. Marchionini, "Hypermedia and Learning: Freedom and chaos," *Educational Technology*, 28: 11 (1998): 8-12.
- J. Morariu, "Hypermedia in Instruction and Training: The power and the promise," Educational Technology, (1998): 17-20.
  - 12. C.J. Bonk, K.E. Hay, & R.B. Fischler, "Five Key Resources for an Electronic Community of

Elementary Student Weather Forecasters," *Journal of Computing in Childhood Education*, 7: 1/2 (1996): 93-118; and Center for Applied Special Technology (CAST), *The Role of Online Communications in Schools: A national study* (Peabody, MA: Author, 1996).

- P.R. Pintrich, & D.H. Schunk, Motivation in Education: Theory, research, and applications (Englewood Cliffs, NJ: Merrill, 1996).
- 14. M. Knowles, The Adult Learner: A neglected species, 3rd ed. (Houston, TX: Gulf Publishing Company, 1984).
- S. Sage, & L. Torp, "What Does It Take to Become a Teacher of Problem Based Learning," Journal of Staff Development, 18 (1997): 32-66.
  - 16. E.L. Deci, Intrinsic motivation (New York: Plenum, 1975).
- 17. T.A. Mood, *Distance Education: An annotated bibliography* (Englewood, CO: Libraries Unlimited, Inc., 1995); and J.D. Thomerson, & C.L. Smith, "Student Perceptions of the Affective Experiences Encountered in Distance Learning Courses," *The American Journal of Distance Education*, 10: 3 (1996) 37-48.
  - 18. Op. cit., M.E. Ford.
- D. Woods, Problem-based Learning: How to gain the most from PBL (Donald R. Woods: McMaster University, 1994).

