

Finding The Critical Success Factors In Distance Learning

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Abstract

The Internet is providing the opportunity to deliver accessible, up-to-the minute material to anyone in anywhere. By using this tool, the industry can improve productivity in a collaborative environment. The initial investment in collaborated information sharing is paid off in a rather short time, leading to tremendous cost cutting and reduction in overhead. If the infrastructure is already setup, the conversion of a traditional delivery system into an online system is not very expensive. However, the issue of student performance in an on line system is important and complex. There are many factors that can contribute to the performance of the students. What are these factors? It is the thrust of this paper to identify the important ones.

Keywords: Success factors in on-line courses, distance learning, Internet learning

Introduction

There has been much recent interest in online teaching, as the Internet has become more and more a viable medium for offering this type of training. Daniel McGinn in the article "Going to College Online" has quoted researchers at InterEd as saying that by the end of 2000, seventy five percent of all U.S. universities will offer some kind of online courses. Generally, higher education is increasingly recognizing the value of distance learning trend. Many recent studies show that universities are putting greater emphasis on online education, and trying to meet the expectations and needs of students (Cheng & Tarn, 1997). Universities who already have online courses are devoting considerable resources to enhance the quality of their online system. Schools that do not offer online courses are planning to offer courses in an online fashion. There are already universities that are fully online without any classrooms. In 1995 Glenn Jones founded Jones International

University, which is a completely online college and became the first one to receive accreditation. This kind of program is of particular interest to individuals with irregular work hours, or unanticipated travel demands or with young children who are interested in pursuing their education but cannot attend a traditional university. The next question to be addressed is what organization will accept individuals with online degrees. McGinn's article suggests that the military, public schools, technical firms may be amenable; but law firms and academia may never totally accept such a degree.

In an online course, the students can become more proactive, than reactive, by customizing the course and allowing a self-pace style for individuals or even for groups. In such an environment, a student can determine what to emphasize, how to concentrate, or even when or where to "attend a class". Other factors that may contribute to effectiveness of an online course, when compared to the traditional course offering, is rapid

updating of course content, ease of navigation through the course material, and accessibility regardless of physical location.

There have been many recent reports indicating that the online courses are successful and improve student learning. These reports concentrate on the assumption that learners are homogenous and neglect the group differences. Many studies show also that face-to-face interaction is very important in the learning process (Bloom, 81). As a result of class attendance and participation, the students learn to exchange ideas, learn critical thinking, and learn the social element of their education.

There are not many studies that indicate the productivity of on-line courses. In educational institutions, the conversion from traditional classroom environment to online system, can be expensive, and can be very costly if not done properly. After the initial conversion, however, the repeatability and delivery cost can be reduced dramatically, especially when the number of enrollees for a course increases. However, it takes more time to plan and prepare to teach and administer an online course. The actual time students need to commit to an online course is actually higher than those of regular classes. Some online classes might require an initial class meeting and on campus exams and some may involve a number of campus meetings. But there are also classes that are offered fully online. Some reports indicate that the best result can be accomplished by offering a course that requires half on-line and half class attendance.

It is important to take measures to ensure the improved productivity and effectiveness. The advantage of an online course is that a course can be offered in a different format. The instructors can develop their own courses with help of technical support or without. Using web development software such as Web CT, Web in the Box, ChalkBoard, or Topclass makes it possible to develop an online course without the necessity of knowing the web language such as HTML. If carefully planned and implemented, the course can be successful (Cooper, 1999).

The delivery system itself is a main concern. Students access the web through the Internet with their computer system and a modem. The speed of transmission is often of bottleneck for receiving information, as receiving a high-bandwidth content is very slow. A typical web session can support asynchronous (can receive at any time), or synchronous (can receive at the same time). The web contains course outline, the on-line tutorial, Electronic bulletin boards for announcements and discussion, and pointers to proper resources and sites.

The Research

Initial literature review has suggested that despite the great advantages of distance learning there are some disadvantages. The main concern in on-line format is the one way learning experience in which students cannot interact with their instructor in a full duplex manner. A study done in 1981 by Bloom concluded that the interaction between teachers and students in the classroom was the major factor in learning. The retention and the learning can be more effective in an interactive system in a physical classroom. Another study done by Murphy in 1990 concluded that the quality of distant education depends on the interaction and participation of the learners. In another study, Weimer concludes that learning interactively will help learners to learn more, retain it longer, and apply it better and continue learning (Weimer 1993 p.49).

The issue of student performance in an online course is even more important and complex than that of regular course, especially for a degree that can be taken fully online. How can student performance be measured in this case? What is the real value of the course or degree? There are many factors that can contribute to the performance of the students. Some of the factors are: quality of instructions, value of assignments, level of interaction, availability of the hardware/software resources, style of teaching, availability of the instructor in on-line mode, ease of use and ease of navigation of the course.

Another important issue in teaching is the effectiveness. There are many researches in distance learning. But, there is no definitive conclusion. Researcher Thomas Russell has collected 355 studies, all showing no significant difference between what students learn in a classroom or far away. But most of those studies deal with television courses. Internet courses are different, and are relatively new. Research in this area is still evolving. However, a study commissioned by Teachers Unions claims that most of the studies use flawed methodology, and concludes, "the research on distance learning has a long way to go."

The main thrust of this research is to identify factors that are effective in learning and evaluate these factors for on-line teaching/learning. Some of the obvious factors include individual differences, characteristics and habits in learning, style of teaching, quality of instructions, and tools in a teaching/learning environment. The objective of this research is also to find the relative productivity of an online course. Specifically, the objectives are:

- to explore the productivity factors in a learning-teaching environment.
- to identify the group differences in learning.

- to specify the performance factors in an online environment.
- to isolate the factors that influence the attitude of learners in a different environment.

A Mini Exploratory Study

Research started to examine the factors that are important in learning/teaching environment. Biner emphasizes satisfaction levels and indicates that a high level of relative performance of student taking online course were associated with (1) student satisfaction with the technological aspects of the course; (2) student satisfaction with the promptness of material exchange; and (3) overall student satisfaction (Biner, 1997). Therefore, we used satisfaction factor as a base to start. In the exploratory study, we examined the difference in satisfaction level of students taking an online course and taking a regular class. The idea was that by evaluating student satisfaction in both online and regular courses, we might gain some insight about the differences between the two groups. We also use this mini study as a tool to interview the instructors and students who have been involved in both on-line and offline courses. The hypothesis for this mini research is:

- Ho: There is no difference in the satisfaction level between students taking online courses or taking a regular course.
- Ha: There is difference in the satisfaction level between students taking online courses or taking a regular course.

Research Design and Methodology

The main purpose of this study is to increase our understanding of the factors involved in learning. The exploratory research will be followed with a more rigorous study. The research design is ex post facto. Then, we will be using a field study to explore the problem in depth. For the exploratory experiment, a survey instrument was designed to assess the opinion of the students who took a course in an online and students who took a course in a regular class, and compare the results. We would evaluate the students' opinion to see whether or not:

- The course increased their knowledge.
- The lecture/instruction helped in understanding the topic.
- The course prepared the student for the real world.
- The assignments were related to the real world.

- The assignments were challenging and stimulating in learning.
- The tools used were effective.
- The level of interaction/discussion between students and the instructor was sufficient
- The level of interaction/discussion between students was sufficient
- The availability of the instructor was sufficient

The survey was short and contained only twelve questions, of which the first three were general in nature. A six point Likert scale was used to measure the responses on an agree/disagree fashion: 1=definitely disagree; 2=generally disagree; 3=moderately disagree; 4=moderately agree 5=generally agree; 6=definitely agree.

There was also an open-ended question to explore other factors. The sample selection was of convenience stratified sampling. Two groups of students were sampled: students who had taken an online course, and students who had taken a regular class. We used this survey to test the hypotheses, reevaluate the problem, and develop a methodology for our rigorous research. Our objective is to describe the phenomena, find critical factors, and build a model of learning behavior.

Data Analysis and Conclusion

The survey was given to approximately 30 students. The mean as well as the standard deviation and t-value of the measurements for the online course and the regular course were calculated. The mean score for the online class ranged from 2.28 to 4.14, while the mean score for each question for the regular classes ranged from 4.13 to 5.00. The mean for the online class group was 3.42 while the mean for the regular class group was 4.53. The standard deviation for online group was 0.6 and regular group was 0.028. Calculation shows that the t-value between the two groups was 2.649. The table value using 28 degrees of freedom and alpha coefficient = 0.05 was 2.048. The calculated t-value exceeded the t-value of 2.649 versus the mean of 2.048. Based on these results, the hypothesis is rejected. It also is concluded that for this mini research, in this particular case, regular class students are more satisfied than online course students.

Other interesting topics that surfaced from the exploratory survey was that some courses fit well for distance learning, but courses that require more interaction should not be offered online because students may feel frustrated by the lack of interaction. For example, courses that require lots of face-to-face interaction and discussion are better taken in a regular class instead of through the Internet. Some of the other

initial findings that came about from the comments of students make the following suggestions:

- Identify the learning objectives clearly.
- Do not put "the book on line" to read, put the critical issues on line.
- Make sure to give the answers to questions, tests, or reviews.
- Get students involved; create an active, interactive environment.
- Recognize that different students have different learning styles.
- Create or identify extra material or resources for the students who need them.
- Prepare a detailed schedule of activities and learning.
- Show students their learning progress

Again, this is an exploratory study and the results of this survey should not be taken without consideration given to limitations. The sample size, the convenience sampling method, and the level of rigorousness of this study limits its conclusion. More importantly, the online courses are generally new. The enthusiasm of the technique of delivery may hide its real value. A more rigorous study that we are planning may reveal further details.

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