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Customer Satisfaction and Intellectual Property Protection: In the Case of Online Educational Institutions

By Ali Dehghan
University of Wesleyan College

Abstract - The present study attempts to contribute to the knowledge of how intellectual property protection can improve student satisfaction in online courses? After the comprehensive literature review and demonstration of online student satisfaction concepts, the paper has reduced, classified and compared the data. The results reflects that the intellectual property protection is one of the latent factors in online student satisfaction assessment and this study should be enhanced by doing a descriptive research in a larger scale.

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I. Introduction

"In recent years, the knowledge-based economy has exhibited a pervasive and ever-increasing demand for innovative ways of delivering education, which has led to dramatic changes in learning technology and organization" (Zhang, Zhao, Zhou, & Jr, 2004, p.75). The Internet has drastically revolutionized the process of obtaining education regardless of time or location for students and made it more challenging for colleges to provide this education (Levy & Hancock, 2003). Because of the low cost and fast distribution of Internet, e-learning is becoming more popular. In the e-learning or distance learning system, students and instructors are separate (Bolliger & Martindale, 2004; Moore & Kearsley, 1996). Despite the primary enthusiasm in online learning systems, there are still serious concerns about Internet-based programs like intellectual property protection.

According to Arbaugh (2000), these concerns raised critical questions that how to produce effective Internet-based courses and what key factors may lead to student satisfaction in online programs. The purpose of this paper is responding to these questions. First of all, student satisfaction with online learning should be defined, thereafter the key criteria of student satisfaction in online programs will be explored and finally the relationship between student satisfaction with online courses and intellectual property protection will be investigated. This paper attempts to do so by conducting a brief literature review.

a) E-Learning

Electronic learning (e-learning) has, over the past decade, become a crucial construct for colleges. It also can be called as one of the most important achievements in the burgeoning field of education and invaluable asset for any education institution. No one even could predict that it would be higher educational institutions with no campuses (virtual environments) which let students attend from any were (Levy, 2007). Delivering the instructions through any electronic media such as Internet, TV, CD-ROM and so on, is called e-learning. These days, because of the expansion of the Internet, which can be called enchantment of technology, online learning and e-learning becomes integrated. Seemingly, Internet's unique features, benefits and advantages, have driven several universities to offer online degrees and educational services via Internet. It should be emphasized that e-learning is a response to higher education's issues. These issues can be classified as: access to education, declining public revenues and the cost of accommodating the education (Alexander, 2001; Daniel, 1997; Johnston, 1992).

E-learning does not only deliver the knowledge to anyone at anytime, but also can train the right people at the right time with the relevant knowledge package (Govindasamy, 2002). According to Alexander (2001) and Bates (1997), Internet is being used vastly in higher education in order:

- To improve the quality of learning
- To increase the accessibility of education
- To reduce the education's cost
- To expand the cost effectiveness of education

To have a better image of e-learning systems, a brief comparison between e-learning and traditional face-to-face classroom learning seems to be necessary. It depicts major dimensions of both learning styles (e-learning and traditional face-to-face classroom learning) as bellow:

Author : University of Wesleyan College.
E-mail : adehghan@wesleyancollege.edu

	Traditional Classroom Learning	E-Learning
Advantages	• Immediate feedback • Being familiar to both • Instructors and students Motivating students • Cultivation of a social community	• Learner-centered and self-paced • Time and location flexibility • Cost-effective for learners • Potentially available to global audience • Unlimited access to knowledge • Archival capability for knowledge reuse and sharing
Disadvantages	• Instructor-centered • Time and location constraints • More expensive to deliver	• Lack of immediate feedback in asynchronous e-learning • Increased preparation time for the instructor • Not comfortable to some people • Potentially more frustration, • anxiety, and confusion

Table 1: Traditional classroom learning vs. e-learning (Zhang, Zhao, Zhou, & Jr, 2004)

To benchmark the quality of e-learning systems, 7 parameters were introduced by six universities in the US (Quality on the Line, 2009; Govindasamy, 2002) as follows :

- Institutional support
- Course development
- Teaching and learning
- Course structure
- Student support
- Faculty support
- Evaluation and assessment

Among these proposed attributes, the student support which can be interpreted as student satisfaction, has the major role in improving the quality of e-learning systems as the student can be counted as a customer and once the customer is satisfied, it approves the quality. Student support in online learning setting is slightly different with traditional classroom instruction, as it mostly depends on the interaction, which is the major difference between e-learning and traditional face-to-face learning.

b) Online Courses

Because of the rapid and tremendous growth of online programs, there is a huge demand for creating online courses. Due to lack of control and supervision, web is simply used as a tool to create many online courses that cannot meet the minimum standards. Most of the online course designers still use the concept of traditional classroom setting rather than taking the best advantages of the opportunities of the web. It is an undeniable fact that online instructors put more efforts and have more workload than traditional teachers, as they have to provide the students with more feedback. However, teaching in live classes has its own difficulties and need special skills. In online teaching environments, instructors may benefit of having enough time to respond the students by reviewing the teaching stuff freely and without any stresses, but traditional instructors should be well prepared to make the lectures professionally and handle students' problems.

So what is the general framework of an online course and what is the ideal one? Online courses usually consist of different sectors such as web-based textual materials, discussion forums in two formats of synchronous (live chat) and asynchronous (threaded discussion or email), assignments (homework, exam, project), communication tools (voice chat) and other items, such as visual case studies and videos (Carr-Chellman & Duchastel, 2000). In most cases, even in the author's personal experiences of teaching online courses, to avoid of any copyright infringement, the students are strongly encouraged to use their own traditional textbooks, as many of them are not available on the internet and the portability of traditional books may let the students spend much time on studying (Carr-Chellman et.al, 2000) .

Satisfaction

A consensus is emerging that customer satisfaction is a critical success factor for any business systems. The current widely accepted idea, considers students as customers and universities as service organizations or service providers (Hennig-Thurau & Langer, 2001). Keller argued that "Satisfaction relates to perceptions of being able to achieve success and feelings about the achieved outcomes" (as cited in Johnson, Aragon, Shaik, & Palma-Rivas, 2000, p. 32). Satisfaction can be obtained when the perceived performance exceeds the perceived performance, otherwise dissatisfaction occurs. It is always purported that a gap exists between a customer (student) and a service provider (educational institute), the more gap, the less satisfaction and vice versa. Unfortunately, there is no universally agreed upon definition of student satisfaction. Among various definitions, Astin(1993)

states, student satisfaction is all about the student's perception and perceived value of his educational institution (Bolliger et al., 2004). One of the chalenging outcomes of student satisfaction is student retention, which will eventually lead to student loyalty. Indeed, student loyalty is considered as an essential key for all universities.

Satisfied students become active ambassadors for their colleges may support them by positive word of mouth and resisting to switch to another institution. Dehghan (2009) review of the literature revealed that student satisfaction is important for educational institutions because:

1) The financial foundation and base of all universities are based on Tuition fees and retaining the students may be of a great help in this regard
2) Retaining the existing students is less costly than gaining new students
3) Satisfied students may help their universities in raising the Teaching quality by their contribution and commitment.
4) Satisfied students may recommend their schools before and after graduation

All above, imply the significance of student satisfaction and how someone can be identified as a satisfied student. Thenceforth the factors that may lead to student satisfaction will be developed.

Johanson (1996) acknowledges that student satisfaction with e-learning highly depends on (1) the technology functionality, (2) the course design, (3) the instructor's performance and his/her instructional strategies and finally (4) the degree of flexibility (Johnson et al. 2000). Similarly, other researchers argue that student satisfaction can be impacted by transparency (Eastmond, 1995), communication potential (Irani, 1998) of course designs and the structure (Romiszowski & Cheng, 1992) of the online courses (Swan, 2001).

It is important to note that new findings indicate that several paremeters can impact on student satisfaction, such as the role of the instructor (Arbaugh, 2000a, Endres, Chowdhury, Frye, & Hurtubis, 2009), however literature review shows the interaction (part of the communication sector) is the key aspect in determining the student satisfaction, therefore it should be explored more in detail.

As it was mentioned earlier, Carr-Chellman et al. (2000) and other researchers argued that communication section in online programs consists of four major categories: (1) Asynchronous interaction , (2) Synchronous interaction, (3) Email, (4) Video conferencing and so on.

Email Communication: This model of communication has multiple applications. It is mostly used for students to contact with their instructors about their assignments or special questions (as the authors usually use to communicate with their professors); however the entire class may use this function to email each other regarding their team projects or group assignments. Furthermore, in some cases it can be used as a private communication tool between the student and instructor or among two students.

Asynchronous interaction: There are three kinds of interaction in e learning: Interaction among students, interaction between a student and an instructor, and interaction between students and the course or student-content interaction. Most of the researchers were thinking that e-learning systems will suffer from lack of interaction, but creation this method of communication (Asynchronous interchanges) has resolved this issue to certain degrees. In this method, students may debate (online dialogue) or post their opinions about special topic (which can be determined by the instructor) through online forums which are called threaded discussion boards or online conference boards. This way of communication, let's the student to share his problems, ideas and experiences with the peers and those people may provide him with their own suggestions, solutions and insights. In some cases, the instructor may lead the discussion (which is called the discussion leader).

Synchronous interaction: In this method, students can interact in a live atmosphere by taking part in live chats or audio conferences. Synchronous interchanges simulate the real face-to-face class, specially some new softwares like Elluminate can create a virtual environment that each one can discuss or ask his questions directly from one person or the whole class and immediately be provided with others feedback.

Video Conferencing: If the instructor wants to conduct a live lecture by showing a presentation or visual case study, video conferencing (online white board) is a key. There is large number of software or websites (such as dimdim) which can be of help in pursuing this purpose. Therefore the entire class can watch a certain presentation simultaneously.

II. The Study

Excluding intellectual property protection, most of the key factors for determining student satisfaction in online courses were explained. Owing to the dramatic development and expansion of Internet and respectively e-learning, all electronic materials become mobile, accessible and deliverable, therefore Intellectual property protection becomes more difficult and more contrversial. Copyright law is a major area of law that affects higher educational institutions" (Levy et al. 2000, para. 25). Copyright law gives the right to a copyright holder to reproduce his work, disseminate it vastly or even sell it. Although basic copyright law gives the copyright to the creator, it may change when it comes to

online classrooms. So that, it brings up a basic and critical question that who owns online materials?

Online materials, in the field of e-learning, can be divided in two groups. Instructor's materials such as course stuff and student's learning properties like assignments, projects, papers and all of his online communications. Generally, copyright law is granted to the author of the work. According to Twigg (2000), most of the e-colleges acknowledge that "The real need is for an institution to have a clear statement of its policy and a mechanism to ensure that the issue of ownership is addressed as early as possible in the development process" (p. 2).

The copyright is granted to the faculty members, since they designe, develope and organize the work, however, based on the current regulations about online courses, the instructors cannot claim for any ownership rights as they are hired and paid. There is also no vigorous copyright for students in online programs that may protect their intellectual properties against infringement.It should be mentioned that, even full time instructors, have no right to keep their teaching stuff as online institutions claim their rights to the copyright (Levy et al. 2000, para. 27).

The author of a copyrighted work should be able to regenerate his work or distribute it or display it, but it shows that students may not have complete ownership right at least on part of their intellectual properties such as their assignments or their postings in threaded discussions, also the institute which offers the online program have the authority to keep and record all of students stuff like their posts in the online board discussion or their private communications and so on, therefore it makes them not to trust on any online learning systems.

III. Conclusion

Trust and satisfaction are proportional and have a direct relationship, the more trust, the more satisfaction and vice versa. Literature review states when someone has confidence in another's intent, it should confer its trust. Therefore, if e-learning provider organizations think about more profit by having long time relationship with their customers (students) and high reputation in education field, they have to put all their efforts to build trust. In case of online learning, these institutions should offer thorough ownership rights to students prior to their enrollments and make them sure that there will not be any sort of cheating or abusing of their intellectual properties. The education institution should also strictly promise that students' data will be kept confidential and stored in accordance with applicable legal provisions. This study identified the significance of intellectual property protection in higher student satisfaction with online courses by recommending the online programs providers to focus on creating trust and commitment between themselves and students, so that satisfaction and probably, the enrollment rate may grow.

The main purpose of this research is to gain a better understanding of the relationship between intellectual property protection and student satisfaction. Theoretically this research extends the knowledge body of intellectual property protection and student satisfaction with online courses by enriching the content of student satisfaction of e-learning.

a) Implication for Further Research

Some areas which are not covered in this paper are exciting and need to be studied. For instance, doing a comprehensive survey to discover the role and importance of intellectual property protection in growing student satisfaction of online programs. The author has decided to do that to fulfill his doctoral research.

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