Student and Teacher Factors as an Antecedents of Students' eLearning Satisfaction: Study of a Developing Country

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ABSTRACT: *In developing countries eLearning is emerging as a fascinating approach. This study intends to address the student and teacher attributes influencing the student eLearning satisfaction in developing country. Enough research has been done for eLearning satisfaction in developed countries; however lack of research address the student eLearning satisfaction in developing countries, having different environmental and technological differences. Quantitative survey technique is used to collect data from students enrolled in online mode of study. The result presents that the student's and teacher's attitude towards eLearning, their computer efficacy, interaction among students, instructor enthusiasm to teach; significantly influence the student eLearning satisfaction. The results will help educational institutes to improve student satisfaction and strengthen their eLearning implementation.*

Keywords: eLearning in Developing Countries, Student Attributes, Teacher Attributes, Student Satisfaction

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1. Introduction

The incredible Internet development has shifted the educationalist's attention towards the need for flexible learning, along with the authorities' financial limitations. In 1980, this shift has formed a noteworthy inducement for educationalists and authorities to adopt eLearning [1]. The use of Information and Communication technology for any type of knowledge delivery or seeking is referred as eLearning. The term eLearning is a generic term referring to IT-Supported learning instead of similar terms such as Open-CourseWare (OCW), Advanced Distributed Learning (ADL), Internet Based Learning (IBL), Web-Based Learning (WBL), E-Education (E-E), Open-Learning (OL), Virtual Education (VE), Virtual Learning Environment (VLE) [2].

The eLearning is essential and fascinating approach for educational institutions and they are gaining competitive advantages by this learning medium [3]. The eLearning environment provides the facility of communication between Student-Teacher, Student-Student with the time and space flexibility [4, 5]. Characteristics of eLearning are enough to compete with the requirement of modern educational society. The time and place flexibility attract the users, especially the ones living in remote areas and the working professionals [1]. The technological developments have also changed the individual learning perspectives.

The developments in the new learning medium have raised the question of individual attitude and satisfaction towards this new paradigm. The computer efficacy level, attitude, interaction among students and teacher has received enough consideration to

find out the individual satisfaction in developed countries [6]. However, eLearning is quite new educational medium in the developing countries [7]. The difference of technology acceptance attitude, environmental and technology constraints in developing countries possibly influences the student satisfaction in different manner.

In order to understand the antecedents of student eLearning satisfaction in the context of developing countries, research on eLearning satisfaction is required. This paper explains the major attributes of teacher and student himself/herself contributing towards student's eLearning satisfaction.

2. Literature Review

In the era of 1980, educational institutions felt the need to explore the essential factors important for the success and growth of institutions. They need to find out the factors which can give them competitive advantage in market [8]. The characteristics of eLearning fulfill the demand of educational institutions to meet the educational standards of modern society. MIT (Massachusetts Institute of Technology) has offered all of its courses also through online mode of study, and has given the vision to institutions about the strategic importance of eLearning.

It is required to understand the student satisfaction as an essential antecedent for the successful eLearning implementation in educational institution. The teacher attitude towards student, his/her technological capability, class dealing as online instructor creates friendly learning environment and achieve the student satisfaction. The attitude of student towards eLearning, his/her computer efficacy level plays a major role towards his//her satisfaction from eLearning [1]. The teacher and student eLearning approach, echelon of the relationship, teamwork and communication contribute towards student eLearning satisfaction [9]. The students give importance to the teacher style and his/her technology approach, interactive teamwork environment, computer proficiency of teacher and student both to attain their satisfaction [10].

2.1 Research Model and Hypothesis

Considering the previous studies, a research framework was proposed to guide this work. Five attributes are discussed related to two major student and teacher dimensions. The relevant hypotheses are proposed in this section for each variable in order to validate the framework.

Student Factors

In literature, enough studies confirm the significant role of student attitude and approach of perceiving the ICT as a major antecedent of student eLearning satisfaction [11, 12]. Attitude considered as a negative or positive assessment of individual behavior or object. The student attitude referred to as their perception after using computer for eLearning activities. The computer works as an assisting tool to work in eLearning environment. The student positive attitude towards computers, e.g. their affection and feels no complexity in use, possibly leads to their satisfaction [13]. Moreover, individual attitude influence the user behavior to use a particular system, instead of their attitude towards a specific system. Hence, attitude towards use of computer system, rather than computer system itself, is of great interest in this study to predict the student satisfaction towards eLearning. Arbaugh [11], Arbaugh [12], Piccoli, Ahmad [13] has tested the relationship of attitude and student eLearning satisfaction in the scenario of developed countries not in developing, having distinct environmental, technological differences. Considering the eLearning as new emerging educational paradigm in developing countries, having different attitudes, following hypothesis was proposed

The flexible way of communication in internet based courses helps the students to improve their conceptual thinking with student participation at broader level. Particularly eLearning environment provides student participation facility at greater level [12]. Student-student and student – teacher interaction helps in building a friendly and constructive environment [14]. Higher the level of communication, better will be the understanding. The quality of communication and easy access to peer students and teacher possibly satisfy the students from the learning environment. Arbaugh has tested the group communication and student satisfaction in the scenario of developed country [14]. However, students in developing countries has different set of minds, hence it is required to understand the influence of group communication on student satisfaction. The following hypothesis is proposed to test the above scenario.

As defined by wood and Bandura [15, 16] self-efficacy in specific, is "*belief in one's ability to mobilize the motivation, cognitive resources, and courses of action needed to meet given situational demands*". Thus, computer self-efficacy is one's

own belief on his/her ability to use a computer. This belief may possibly influence one's intent to accept a system. Individuals who are less confident about their computer efficacy and determination to seek the work goal are not able to perform the task in a proper manner [17]. Hence the students with high computer efficacy level may produce better result and are more satisfied from new system. Barbeite and Weiss [15], Wood and Bandura [16], Bandura [17] has explained the computer self-efficacy in different internet based studies, few studies focus the eLearning environment but not in the scenario of developing country. Hence, we intend to fill up this gap and proposing a relationship between computer self-efficacy and student eLearning satisfaction focusing developing country.

H1: Student factors influence the students' eLearning satisfaction.

Instructor Factors

The social influence model of technology proposed that the individuals' perception about technology is influenced by supervisor or teacher attitude towards technology. Teachers' positive attitude towards new technology effects their behavior intent to use the new system or environment [14]. Teachers are the major actors in order to frame the student constructive and positive perspective about new learning technology [18]. This perception helps the students to achieve better results and make them satisfied. Lack of studies focus the teacher attitude towards eLearning environment in developing country; hence this study tries to fill up this gap in literature by proposing he below mentioned hypothesis.

The researches proved that teacher timely response significantly leads to student satisfaction [11]. The teacher way of teaching and his behavior influence the student [19]. The teacher dealing behavior with students, on-time response to their queries and his/her capabilities to handle eLearning activities properly helps in improving student satisfaction [1, 13]. It's not the new technology implementation, it's the role of facilitators how they improve its acceptability among individual [3, 17]. It is required to understand the teacher response time and student satisfaction from the response. Hence, the following hypothesis is proposed.

H1: Teacher factors influence the students' eLearning satisfaction.

2.2 Research Model

To accomplish this study, a research model is proposed and presented in Figure 1. The student eLearning satisfaction is discussed as a dependent variable.

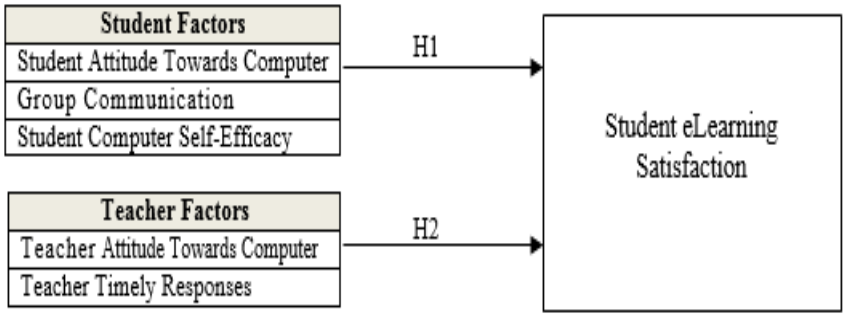

Figure 1. Factors Effecting Student eLearning Satisfaction

3.Methodology

Data Collection and Sample

Quantitative research technique has been used in this study. Survey was conducted to collect primary data and to prove the hypotheses. Questioner was used as an instrument for data collection.

Population. The population of this study was the online students. As this study was measuring the graduate and master level student's satisfaction that was enrolled in online learning environment, so only the specific online students were contacted to fill the questionnaires. The 276 out of 350 questioners were included that were flawless.

Instrument. Questioner was used as a survey instrument. All the respondents were asked to mark only one option from Likert scales. There was 30% (N =83) female and 70 % (N = 193) male respondents. All the items were measured on five-point likert scale.

4. Results

In this study SPSS version 20 was used for the analysis of data. The Bivariate Correlation shows correlation for each variablein Table 1

No.		Cronbach's Alpha	1	2	3	4	5	6	7
1	Gender		1						
2	Age		.035	1					
3	Program Enrolled		.14*	– .06	1				
4	Initial Computer Skills		.06	.006	– .025	1			
5	eLearning Experience		.035	– .129*	.038	.225**	1		
6	Student Factor	.807	– .029	.059	–.064	– .382**	– .459**	(.807)	
7	Instructor Factor	710	– .01	.048	–.093	– .445**	– .525**	.763**	(.710)
8	Student EL Satisfaction.	705	– .003	.025	–.042	– .124*	– .403**	.787**	.682**

Table 1: Correlation Matrix.

Regression Analysis

In order to find the effects mentioned in each hypothesis concerning the student eLearning satisfaction, multiple linear regression was applied via using the interaction and dummy variables See Table 2.

	A	R^2	ΔR^2
Step 1:			
Controls		.71	
Step 2:			
Student Factor	.41 ***	.76	.05
Instructor Factor	.31***	.75	.04

Table 2. Regression Analysis

The results of the regression analysis revealed that student factor is significantly associated with the student eLearning satisfaction ($\beta = .41$, $p < .001$) and shows the high significance level. Student factor was accounted for 4.7% variance ($\Delta R^2 = .047$) in student eLearning satisfaction. The results of regression for student factor was strongly supporting the first hypothesis, in which the strong positive influence of computer efficacy, interaction among students, their level of anxiety and attitude towards eLearning on student's eLearning satisfaction was found.

The combine effect shows the positive relationship between instructor factor and student eLearning satisfaction ($\beta = .31$, $p < .001$). The significant level was also high in this relation and 4% ($\Delta R^2 = .04$) variance was found in student eLearning satisfaction. Hence it was proved that the relation among instructor factor/independent variable (attitude towards eLearning, timely response) and student EL satisfaction was very strong and positive as it was hypothesized.

5. Conclusions

The implementation of web-based learning environment is very useful for students and teachers. Both, the time and money, can be saved by implementing new technologies. The implementation cost for once is not comparable with the student's learning demands.

The results of this study are highly significant and both of the hypotheses are supportive. The results of the student factor

shows that once the efficacy level will increase among students and proper training of computer may help in the reduction of computer anxiety and successful implementation of eLearning environment.

The student satisfaction is affected by the instructor handling of online activities. If the instructor is not enthusiastic about online activities and have no input in the instructing activities then he would receive the same negative response from students.

Though a vigilant and systematic endeavor has been made to integrate essentials of eLearning, but we cannot deny the presence of limitations. We tried our best to tap all the main factors that were influencing student satisfaction and proposed an incorporated research model, but it, possibly not be the inclusive due to the time and recourses limitation. The major limitation was about the population who was using eLearning for their education.

The results of this study can be useful for the educational institutions before implementing eLearning environment. Administration should consider the factors that have been pointed out in this study, for successful eLearning implementation.

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