

## Effectively Using E-Learning Teaching Methods – Experience Evidence at the Banking University of Ho Chi Minh City

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**SUMMARY:** In this study, the authors choose a quantitative research method to evaluate the effectiveness of using E-learning at the Banking University of Ho Chi Minh City (HUB) from the perspective of students' experiences. In which, the effectiveness of using E-learning in research is seen from three aspects, namely (1) the acquisition of course materials, (2) lecture performance, (3) satisfaction with the lesson. Lectures are based on the model of E-Learning (Johnson, 2008) with some appropriate adjustments according to actual conditions to evaluate the effectiveness of using E-learning at HUB. At the same time, the study also examines the effectiveness of using E-learning at HUB under the influence of factors related to (1) students' ability to use technology as well as factors representing the learning environment. Online learning in which students participate, including the usefulness, photo-social interaction and social presence in the online learning process affect the effectiveness of E-learning at HUB. This helps the research team to propose valid and meaningful recommendations for the effective use of E-learning at HUB.

**KEYWORDS:** E-learning, E-learning effectiveness, HUB.

### 1. INTRODUCTIONS

E-learning has been around for over a decade and Universities are increasingly adopting it to provide a better learning experience for students. E-learning is the use of electronic means to deliver and receive education. E-learning offers many benefits (time and space flexibility, cost effectiveness, etc.), it also overcomes the inherent shortcomings of traditional learning that led to its wide acceptance. by educational institutions. However, not all educational institutions are successful in applying E-learning because there are still many barriers that are hindering the promising benefits of E-learning (Ali, 2017).

Education continues to be influenced by the advent of technology due to the process of global digitization. Therefore, the government has advocated the integration of information and communication technology in all areas of education where Universities modernize their teaching methods through e-learning systems. Despite the challenges facing ICT integration, namely lack of resources, network connectivity, lack of support and faculty capacity to ensure that teaching strategies are appropriate, In line with the proposed innovations, there are still some good practices where some trainers use E-learning effectively to enhance the learning environment. Therefore, Tyilo (2017), Tham & Werner (2005) recommend that universities need adequate staff training, network upgrades and enhanced technical support for staff for effective teaching innovation.

Although E-learning of universities has been systematic and in the world there are studies conducted on E-learning of universities, but most of the related empirical

researches mainly focus on introduces an approach to learning through E-learning and uses mainly qualitative analytical methods, with relatively little evidence-based research on how key aspects of E-learning are constituted. internal from the student's point of view and how these aspects may be relevant to the university student's learning experience (Elliset & ctgal 2008). At the same time, there is still a lack of scientific research on E-learning in Vietnam in general, and E-learning at universities in particular, especially in evaluating the effectiveness of using E-learning. Therefore, the field of E-learning research needs more empirical evidence on the effectiveness of using E-learning through identifying the factors affecting the effectiveness of using E-learning to assess the level of E-learning. influence and propose possible solutions for the effective use of E-learning in terms of the actual conditions of a university, including (1) computers acting as additional supporting devices. fig; (2) an LMS with archiving functionality for educational content; (3) be able to exchange information between discussion groups established by different stakeholders; (4) improve classroom performance and regular satisfaction by evaluating the E-learning program; (5) exercise social presence to maintain a positive learning environment.

In the first 6 months of 2020 and February 2021, Banking University of Ho Chi Minh City. Ho Chi Minh City (HUB) has conducted E-learning online learning and teaching during the period of social distancing because of the Covid-19 pandemic. This E-learning online learning and teaching process, besides the advantages, still has certain shortcomings. For HUB, E-learning becomes a new priority during the time

of social distancing because of the Covid-19 pandemic. On the other hand, the reality shows the absence of research on E-learning at HUB, especially on the effectiveness of using E-learning. Therefore, it is urgent to study the effectiveness of using E-learning at HUB. Therefore, the study conducts a quantitative analysis of the factors affecting the effectiveness of using E-learning at HUB from the perspective of student experience in order to provide empirical evidence as a basis for proposing meaningful solutions. meaning for E-learning at HUB.

## 2. GENERAL THEORY ABOUT E-LEARNING

### 2.1. Online training concept

Online training, also known as E-Learning (*Electronic Learning*) is a new term. Currently, according to different perspectives and in different forms, there are many ways of understanding E-Learning. In a broad sense, E-Learning is a term used to describe learning and training based on information and communication technology, especially information technology. From a modern point of view, E-Learning is the delivery of learning content using modern electronic tools such as computers, computer networks, satellite networks, the Internet, Intranet, etc., in which learning content can be obtained from Websites, CDs, video tapes, audio, etc. via a computer or TV; Teachers and learners can communicate with each other via the network in the form of: e-mail, online discussion (chat), forum (forum), conference, video... In addition, there are a few other tools for E-Learning such as: *Computer Based Learning* (CBL), *Web Based Learning* (WBL), *Multimedia Based Learning*. There are currently two forms of communication between teachers and learners through an online training system: synchronous communication (*Synchronous*) and asynchronous communication (*Asynchronous*). Synchronous communication: communication in which many people access at the same time and exchange information directly with each other: online discussions, video conferencing, etc. Asynchronous communication: visitors do not necessarily accessible at the same time, (eg, self-study via the Internet, CD-ROM, e-mail, forums). The characteristic of this format is that students are free to choose the time to attend the course.

Understood in a general sense, online training is a term used to describe learning and training based on information and communication technology, especially information technology.

Online training is learning that is delivered or supported through electronic technology. Transmission through various technologies such as the Internet, TV, video tape, intelligent teaching systems, and computer-based training. E-learning is a term used to describe learning and training based on information and communication technology. (Derek Stockley 2003)

Although it was born not long ago, so far, online teaching has been a very popular type of learning worldwide, not only supporting self-study and distance learning students, but It is also very useful for classroom learning according to the traditional type of training.

Up to now, 5 types of online training can be listed as follows:

*Technology-Based Training* (TBT) is a form of training with the application of technology, especially based on information technology.

*Computer-Based Training* (CBT) is a form of training using training applications (software) on CD-ROMs or installed on independent computers, no network connection, no communication with the outside world. This term is synonymous with the term *CD-ROM Based Training*.

3) *Web-based training* (WBT - *Web Based Training*) is a form of training using web technology. Course content, information about learners and course management are stored on the server and can be easily accessed by users through a web browser. Learners can communicate with each other and with teachers, using the functions of direct communication, forums, e-mail, ... and can hear the voice and see the image of the person communicating with me.

4) *Online training* (*Online Learning/Training*) is a form of training that uses a network connection to perform learning: get learning materials, watch programs, communicate between learners and teachers. ..

5) *Distance Learning* is a form of training in which the teacher and the learner are not in the same place, not even at the same time. For example, training using video conferencing technology or web technology.

#### ➤ **Some forms of E-Learning training**

- *Technology Based Training* (TBT - *Technology Based Training*)

- *Computer Based Training* (CBT - *Computer Based Training*)

- *Web Based Training* (WBT - *Web Based Training*)

- *Online training* (*Online Learning/Training*)

*Distance Learning* (*distance learning*)

#### ➤ **Audience of E-Learning (Who Uses E-Learning?)**

Enterprises, government agencies, educational institutions and training centers are the places that use E-Learning the most. Enterprises: Use E-Learning to train employees in new skills, improve production, and improve professionalism.

Government agencies: Using E-Learning to keep productivity high and training costs low.

Educational organizations: E-Learning helps students of universities and colleges achieve their learning goals. At the same time, improve the capacity of employees from high school to university level. Training Center: Using E-Learning to enhance and expand training programs for modern classrooms.

➤ **Indicators showing the effectiveness of using E-learning**

Course material acquisition

- Lecture performance ( *Lecture performance* )

- Satisfaction towards *lecture* .

➤ **Factors affecting the effectiveness of using E-learning**

Application - *specific Computer Self -efficacy*;

*Computer efficacy* : This information technology literacy is essential for all stakeholders involved in the application. E-learning to gain maximum advantage in the use of teaching methods and interaction through information technology. Computer literacy can be defined as the belief that a person's ability to operate a computer is influenced by that person's motivation and behavior (Bandura, 2006). This capability is said to influence the success of E-learning, because all equipment in E-learning related to information technology.

*Perceived usefulness*: Utility is the degree of perception, the degree of belief by a person that using a system can improve job performance. For E-learning, technology can provide some benefits in several respects: *First* , when technology provides wide access for students to access information both in quality and quantity; *Second* , when technology can help students organize and control the learning process, then students can improve flexibility and convenience for later learning. E-learning provides extensive flexibility in the teaching and learning process.

*Interaction*: *Interaction* is the exchange of information that occurs during the E-learning process. Interaction allows everyone to share information, get feedback, and easily measure progress. For example, in an asynchronous learning system, teachers will upload learning materials, students will occasionally respond to learning materials, consideration of existing feedback is expressed through through teachers submitting answers to create a deeper exchange. In the synchronized system, teachers will immediately receive direct feedback from students on learning materials and can directly perform assessments and respond to students' questions. The more often students interact in the system, the better information sharing within a class can be, creating a positive classroom environment.

*Social Presence*: For successful continued learning, one of the issues that must be considered is the environment, specifically the extent to which the environment can promote the success of learning. practice. Social presence is the degree to which we perceive others as private individuals, and interpersonal interactions are reciprocal. In E-learning, interaction and social communication through the use of computers is an important issue behind the success of online learning. The higher the learner's awareness of a means of communication that is personal, sensitive, caring, family-warm, sociable and dynamic, the greater the presence of sociability is created.

**3. RESEARCH ON THE EFFECTIVENESS OF E-LEARNING AT HUB**

**3.1. Exploratory factor analysis results**

Although E-learning of universities has been systematic and in the world there are studies conducted on E-learning of universities. But most relevant empirical research has mainly focused on introducing approaches to learning through E-learning. Primarily using qualitative analysis, there is relatively little evidence-based research on how key aspects of E-learning are internally constituted from the student's perspective and how these aspects can be related to the learning experience of university students (Elliset et al., 2008). In their research, the authors choose a quantitative research method to evaluate the effectiveness of using E-learning at HUB from the perspective of students' experiences. In which, the effectiveness of using E-learning in research is seen from three aspects, namely : (1) The acquisition of course materials, (2) Lecture performance, (3) Satisfaction with the students. The lectures are based on the model of E-Learning (Johnson, 2008) with some appropriate adjustments according to actual conditions to evaluate the effectiveness of using E-learning at the HUB. At the same time, the study also examines the effectiveness of using E-learning at HUB under the influence of factors related to (1) students' ability to use technology and (2) factors representing the environment. Online learning schools that students attend include elements of usefulness, photo-social interactions, and social presence in the online learning process. Thereby, the proposed research model:

$$EF = \beta_0 + \beta_1 * US + \beta_2 * CA$$

In there:

*EF* : *Effective use of E-learning through the acquisition of course materials, lecture performance, satisfaction with lectures.*

*CA* : *Self-efficacy in using computers for specialized applications*

*US* : *The usefulness, interaction and presence of sociability in online learning at HUB*

*β0* : *intercept coefficient; represents the mean value when the independent factors in the model are 0.*

*β1* is the regression coefficient of students' ability to use computers for specific applications (*X1*),

*β2* is the regression coefficient of the factors of usefulness, photo-social interaction and social presence during online learning at HUB .

The survey was conducted on 475 respondents, in which female respondents accounted for a high proportion in the survey sample (84.2%). Students in the 3rd and 4th years are the subjects of the survey, accounting for a high proportion (91.4%). The standard university students participated in the survey mainly (73.7%).

Testing the reliability of the scale: the study performed Cronbach's Alpha reliability analysis of the independent and dependent variable scales in the model. The results show that

there are 18 observed variables that are reliable enough to carry out the next steps because the variable-total correlation coefficients are all greater than 0.3; Cronbach's Alpha reliability from 0.872 to 0.935 (>0.6) shows that the scales

are satisfactory and have high reliability. From the results of testing the reliability of the scale, EFA analysis is performed to test the convergent value and discriminant value.

**Exploratory factor analysis**

**Table 1: KMO coefficient and Bartlett. Test**

KMO . coefficient		0.945
Bartlett's test	Chi-squared value approx.	4581.042
	DF	153
	Sig.	.000

**Source:** Extracted research data of the author's team

According to table 1, the coefficient KMO=0.945>0.5 with significance level Sig.=0.000<0.050 in Bartlett test, so the EFA method is suitable for the data and the observed variables are correlated with each other in terms of scope. overall micro.

In addition, there is a total variance extracted value of 61.156% (>= 50%), so the EFA model is suitable.

**Table 2: Factor Rotation Matrix**

	Components		
	first	2	3
Q17	.765		
Q14	.748		
Q4	.708		
Q13	.703		
Q19	.699		
Q18	.683		
Q16	.650		
Q20	.636		
Q6	.602		
Q15	.570		
Q11		.752	
Q12		.732	
Q10		.719	
Q9		.655	
Q8		.597	
Q2			.828
Q1			.818
Q3			.663

**Source:** Extracted research data of the author's team.

The results of the EFA method show that there is no change in the number of observed variables compared to the original, in which there are 8 observed variables belonging to 2 groups of independent variables and 10 observed variables belonging to 1 group of dependent variables.

**3.2. Multivariate linear regression analysis**

**Table 3: Pearson correlation coefficient matrix (N=475)**

Correlations			
		SHIFT	US
SHIFT	Pearson Correlation	first	.474**
	Sig. (2-tailed)		.000
US	Pearson Correlation	.474**	first
			.753**

	Sig. (2-tailed)	.000		.000
EF	Pearson Correlation	.503**	.753**	first
	Sig. (2-tailed)	.000	.000	

Source: Extracted from the author's analytical data.

According to Table 3, the study conducted a correlation test with Pearson's coefficient to quantify the level of association between quantitative variables. The results of Table 3 show that all 2 groups of independent variables have a correlation ranging from 0.503 to 0.753 with the dependent variable at 1% significance level (Sig.< 0.01). Accordingly, the group of independent variables showing the usefulness, interaction and presence of sociability in the online learning process has the strongest correlation with the dependent variable (correlation coefficient 0.753) and the group of variables. Demonstrates the ability to use technology (personal ability to use computers for specialized applications) second strongest correlation with the dependent variable (correlation coefficient 0.503).

Regression analysis was used to evaluate the influence of two groups of independent variables on the dependent variable. The value of the factors used for regression analysis is the average of the observed variables that have been tested by Cronbach's Alpha and the EFA method. The analysis is performed by the Enter method, the variables are entered at the same time to select based on the criteria of selecting independent variables that have a relationship with the dependent variable with statistical significance Sig.<0.05; Accordingly, both groups of independent variables meet this requirement with statistical significance Sig.<0.05.

Table 4. Regression model fit test according to adjusted R<sup>2</sup>

Model	CHEA P	R Square	Adjusted Square	R	Std. Error of the Estimate	Durbin-Watson
first	.771	.594	.592		.38786	2.084

Source: Extracted from the author's analytical data .

R<sup>2</sup> value reaches 0.594, the adjusted R<sup>2</sup> value reaches 0.592 and is used to reinforce the model's goodness of fit, that is, two groups of independent variables in the model can be explained 59.2% of the change in E-learning efficiency due to the variables in the model, the remaining 40.8% of the variation of the dependent variable was explained by independent variables outside the model. The results from the test show that the Durbin-Watson coefficient is 2.084, showing that the model has no autocorrelation (1<d=2.084<3).

Table 5. Results of multiple linear regression analysis

Variable	Unnormalized regression coefficients	Normalized regression coefficient	t	Sig.	VIF
Constant	.567		4.095	.000	
SHIFT	.189	.188	5.647	.000	1.291
US	.637	.663	19,906	.000	1.291
<b>Dependent variable: EF</b>					

Source: Extracted from the author's analytical data.

According to table 4, the statistical value of F is significant with Sig.=0.00<0.001, the model is suitable with the research data set, accepting the hypothesis that 2 groups of independent variables have an influence on the dependent variable. The variance exaggeration factor VIF<2 for observed variables from the primary data set collected from the survey indicates that the correlation is not close between the independent variables, so there is no multivariate phenomenon. collinear .

From the above results, the model after testing is presented as follows:

$$EF = 0.567 + 0.189*CA + 0.637*US$$

In which, 2 groups of independent variables have a positive relationship with the dependent variable at 1% significance level.

#### 4. DISCUSSING RESEARCH RESULTS

The usefulness, photo-social interaction and social presence in the online learning process have the strongest impact on the effectiveness of using E-learning ( $\beta=0,637$ ). In which, the variable usefulness, photo-social interaction and social presence in the online learning process at HUB has a regression parameter of 0.637, which is positively related to the E-learning efficiency variable. at 1% significance level. Accordingly, when the average usefulness, photo-social interaction and social presence in the online learning process increased (decreased) by one point, the effectiveness of using E-learning increased (decreased) by 0.637 points with condition other factors remain unchanged. The factor of personal capacity in using computers for specialized applications (or the ability to use technology) has the second

strongest impact on the effectiveness of using E-learning ( $\beta=0.189$ ). In which, the technology usability variable has a regression parameter of 0.189, which is positively related to the effective variable of using E-learning with the significance level of 1%. Accordingly, when the average ability to use technology increases (decreases) by one point, the efficiency of using E-learning increases (decreases) by 0.189 points, provided other factors remain unchanged.

## 5. E-LEARNING DEVELOPMENT DIRECTION OF BANKING UNIVERSITY OF HO CHI MINH CITY. HO CHI MINH

Information Technology Management Department of Banking University of Ho Chi Minh City. Ho Chi Minh City has early conceived and built an online learning management system (LMS- Learning Management System) since 2015. In early 2020, when the world broke out in the Covid-19 pandemic, the main LMS-HUB system. The method went into operation, implemented the combined teaching method in class and online to the lecturers and students of HUB, changed the form of learning from offline to online during the first social distancing period in February/ 2020 (Notice No. 109/TB-ĐHNH) and is still being combined and deployed to the present time when the epidemic situation is still complicated.

LMS- HUB is an E-learning online training support system of Banking University of Ho Chi Minh City. Ho Chi Minh City aims to innovate teaching and learning methods, creating conditions for learners to discover their own potential; acquire in-depth knowledge of the discipline. Each class will actually have a course on the online learning system for lecturers and exchange students. Instructors can post relevant documents to support students' learning, assign and control assignments during the learning process, and perform tests through this online learning system. Students will log in with their student ID. Thus, students are more independent in their research during their studies, helping to develop intellectual capacity and personal skills, and shaping positive life values. This form of online learning is applied in the first 6 months of 2021, February 2021 and from May 2021 to present, when Ho Chi Minh City Ho Chi Minh City faces the 4th epidemic and implements social distancing. In addition to the function of supporting teaching and learning, the LMS system is also used effectively in organizing the end-of-course exam for the academic year 2020-2021 (Decision 2009 dated October 19, 2020 promulgating the Temporary Regulation assessment time by online exam). In addition to the form of submission of essays or assignments instead of the direct end-of-course exam (Notice of 24 June 2, 2021), the School uses the LMS system to organize online English-language exams- Listening of the formal training system, Listening-Speaking of students of the high-quality program, Listening-Speaking skills of the formal training system and diploma 2. (Notice 567 dated June 8, 2021). The school has

issued detailed and timely implementation instructions so that teachers and learners do not encounter obstacles, although this is the first time applying this form of end-of-term exam. (Notice 600 dated 08/06/2021)

At the same time, the Information Technology Management Department has also organized many training sessions for lecturers on using the LMS HUB system, using the online learning software ZOOM, and how to build video lectures for activities. online learning. (Notice No. 08/DHNH-IT).

Grasping the needs of learners, social trends and the complicated developments of the Covid-19 epidemic, HUB deploys to build a distance online training program for Diploma 2 in English Language and Economic Law. enrollment in September 2021, and is expected to continue to deploy to other disciplines. HUB organizes for the faculty of the Faculty of Foreign Languages to survey distance learning programs from other schools, organize training courses to develop teaching materials and teaching videos for the curriculum.

Thus, together with the LMS-HUB system and training programs for teachers, HUB has initially monitored and controlled students' learning activities when implementing online learning, while continuing to develop distance learning programs for majors, ready to convert the form of learning from traditional classrooms (offline) to online teaching while maintaining interaction between lecturers and students. Students can also be more active in their learning process, can review the learning content through the lecturer's documents and actively arrange the time allocation to complete the assigned tasks, ensuring quality training according to output standards.

## 6. A FEW RECOMMENDATIONS

Training and improving the level of use of online teaching facilities for lecturers.

Facilitate the exchange and sharing of online teaching methods, ways to increase interaction between students and between lecturers and students to increase student motivation.

Upgrading the LMS system in order to reduce and gradually eliminate the overload, causing "crash" of the LMS system, affecting the teaching and examination of students.

Register with Microsoft VietNam so that teachers can actively organize classes through Microsoft teams connected to the list of students in classes in the LMS system. Thus, the use of teaching methods that can be unified to reduce the use of other forms of teaching such as Zoom meeting or Google Meet still has certain limitations.

Building a data warehouse, learning materials, general teaching videos according to each topic or short topic for each subject on the LMS system, students can actively access to review and research according to their individual needs. at any time, overcome limitations due to objective factors such

as unstable transmission lines from learners, different teaching capacity of each individual student, etc.

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