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Factors Affecting Satisfaction on Online Education on Students Digital Teaching Page in Ho Chi Minh City, Vietnam

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ABSTRACTS

Student satisfaction is of utmost importance to universities. Understanding that problem, factors affecting the satisfaction of online education on the digital teaching page of students in Ho Chi Minh City were studied to give suggestions to universities to improve the satisfaction of online education. satisfaction as well as the quality of online teaching. From the theoretical basis and research model of the available studies, we have adjusted and come up with our formal research model. The research methods are qualitative and quantitative methods. The questionnaire was processed by SPSS with techniques to evaluate the reliability of the scale through Cronbach Alpha coefficient, EFA factor analysis to identify groups of variables to include in multiple regression analysis. The results showed that there are two groups of variables affecting student satisfaction arranged in descending order: Lecturer and Interaction, Course overview. An overview of studies in the world shows research on factors affecting online learning. Studies in the world conducted from 1989 to the present have changed a lot in terms of research contents and methods with many different angles in many countries. Meanwhile, in Vietnam, studies on this issue have only been carried out in recent years, mainly in the direction of assessing the impact of factors on learning outcomes without any comprehensive research. assess the factors affecting student satisfaction, propose measures suitable to the current context to overcome, and have a better overview of the problem. Therefore, this study was conducted to fill in this research gap.

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1. INTRODUCTION

Improving the quality of training is the top goal of Vietnam's education sector. Currently, in the trend of globalization, the quality of education is becoming more and more urgent for the existence and development of each university. Therefore, improving the quality of training is a process that needs to be carried out continuously, the opinions about the quality of training from the students - who are directly enjoying the training service are a component. make an indispensable contribution to the improvement of training quality of universities.

Moreover, the need to apply information technology in teaching is a step that most universities in the country are aiming for. And it is slowly starting to become a reality. Therefore, student satisfaction in the online training environment is seen as their positive evaluation of the services being provided by the school where they are studying, especially in which the quality is online training services. Since then, measuring student satisfaction with the quality of the school's online training service is necessary for the school to recognize and make adjustments in providing training services accordingly.

Using existing literature, the study begins by introducing and discussing a research model illustrating the factors affecting student satisfaction with online education.

(i) Investigate factors affecting student satisfaction in university online education and find out some factors affecting this result.

(ii) Proposing recommendations to renew and improve the quality of teaching and learning at universities in Ho Chi Minh City.

In this study, structural equation modeling is applied to examine the factors affecting student satisfaction in the context of university online courses. Independent variables included in the study: course structure, faculty, interaction are potential determinants of online learning. The novelties of this study are in **Table. 1** :

Table. 1 Author and research result.

Author	Research results
Butler and Winne (1995)	Self-directed learning is at the heart of student achievement. The study explains how feedback is inherent and is a key determinant of the processes constituting self-regulating learning, and examines areas of research that build contemporary models of how feedback occurs in learning. practice. Specifically, the study begins by synthesizing a model of self-regulation based on contemporary education and psychological literature. Then, use that model as a structure to analyze cognitive processes involved in self-regulation, and to interpret and integrate findings from different research traditions. The study proposes an elaborate model of self-regulating learning that could include these findings and highlight cognitive functioning of monitoring as central to self-regulating cognitive engagement. This model was then used to examine (a) recent research on how feedback affects cognitive engagement with tasks and (b) the relationship between forms of participation and achievement. accumulate. The author concludes with a proposal that feedback research and self-regulation research should be closely combined and that the modeling aspect should be explicitly addressed in future research in both areas.

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Table. 1 (continue). Author and research result.

Author	Research results
Arbaugh (2000)	While the number of college courses offered over the Internet is rapidly increasing, the author's knowledge of what makes these courses an effective learning experience for students is still limited. Therefore, the author conducted a study examining the effects of technological, pedagogical, and student characteristics on students studying in Internet-based MBA courses. Of these characteristics, the author finds that only those who reflect the instructor's efforts to create an interactive classroom environment are significantly associated with student learning. Other characteristics such as the ease of use of the course software package, the flexibility of the online classroom environment, and the number of times students are logged into the web course are not significantly related to student learning. These findings suggest that to some extent technological sophistication may be important, teaching expertise may be a key criterion for successful teaching in an online classroom setting. As a result, instructors may need to spend more time developing and honing teaching skills such as working concurrently with a smaller number of students, developing interesting discussion questions, and promote intimacy. To support the growth of this faculty, business schools will likely need to make significant infrastructure investments to ensure that their online courses are pedagogical and technologically beneficial to student learning. pellets.
Dembo and Eaton (2000)	This article contains many educational reforms that do not give due attention to improving student learning. An important component of academic success is a student's motivation and ability to take responsibility for their learning. One way to increase academic performance is to teach students how to become self-regulating learners. Using Zimmerman's model of academic self-regulation to identify six behavioral dimensions that affect a person's motivation to learn, learning methods, time use, control over one's physical and social environment, and performance. This model is unique in that it uses non-thematic outcomes of school attendance to influence learning outcomes. The study discusses each aspect of self-regulation in terms of research supporting its effect on academic performance, as well as developmental concerns for students in middle schools. Finally, the author provides suggestions on how teachers can help students acquire self-regulation skills.
Graham and Scarborough (2006)	This article reports on the development of a learning environment asynchronous for teaching introductory macroeconomics for about 200 distance education students. Research supports evidence in current literature that computer-mediated communication, and especially cooperative learning, can make a positive difference to the educational experience of some students. These findings are based on both quantitative and qualitative data obtained from student assessments, engagement levels, staff interviews, and online media analysis. Discussions focused on the degree of cooperation, the role of assessment, curricula and pedagogy, and students' attitudes toward economics.

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Table. 1 (continue). Author and research result.

Author	Research results
Ley (1999)	Describe a feedback system for distant students that includes tools and materials to provide regular fixed-response assignments and on projects or essay-response assignments. A gap feedback system depends on carefully planned, written assignments; specified evaluation criteria; And technology. It includes documentation, progress tracking, standardized feedback based on specified assessment criteria, and multiple assessments throughout the course. The proposed feedback system offers technological limitations but still provides useful feedback to facilitate distance student learning. This system can be adapted to benefit students following traditional instruction. A description of the feedback system components follows a brief introduction to instruction feedback and response levels and functionality.
LaRose and Whitten (2000)	The growing popularity of the "World Wide Web" as a means of providing instruction in higher education recalls an old debate about the effectiveness of instructional technology. Current limitations of Web media are likely to limit teachers' immediacy to Web courses and have a negative impact on both sensory and cognitive learning. Web courses also seem to be a lacking means for forming close relationships with other students. But Web courses also have the potential to be more immediate than conventional classroom instruction by introducing a new "body" into the classroom, the computer itself. The author argues that learners' interactions with computers can convey a sense of individual tutoring, rather than large group classroom instruction, which can increase immediacy. Social cognitive theory has been applied to develop a unified concept of instructional immediacy that includes teacher, student, and computer agency. An exploratory qualitative ethnographic content analysis of three Web courses was completed to identify potential indicators of immediacy in Web classrooms and to make recommendations for future research. a hybrid of course design and Web course design.
Swan (2006)	This article examines the factors influencing student satisfaction and perceived learning from asynchronous online learning. It reports on an empirical investigation into the relationship between student perceptions and course design factors in 73 SUNY Learning Network courses during the spring semester of 1999. The study revealed three factors. Common factors - clarity of design, interaction with instructors, and active discussion among course participants - significantly influence student satisfaction and perception of learning. Such findings are relevant to different types of interactions and the "learning community" model of online learning.

2. METHODS AND MATERIALS

This study takes hypothesize that course structure will be closely related to user satisfaction and learning outcomes, especially when the course material is organized into logical, understandable components, and communicating course goals and processes will lead to high levels of online learner satisfaction and learning outcomes. Therefore, the hypotheses are:

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(i) **H1: Course structure positively affects user satisfaction.** Instructor feedback to students can improve learners' emotional responses, increase cognitive skills, knowledge, and activate metacognition. Metacognition refers to perception and cognitive control through the planning, monitoring, and regulation of cognitive activities. Metacognitive feedback related to learner progress directs learners' attention to learning outcomes. When metacognition is activated, students can become self-regulating learners. They can establish specific learning outcomes and monitor the effectiveness of their learning methods or strategies (Chen, 2002).

(ii) **H2: Trainers positively influence user satisfaction.** Swan (2001) reported that students' perceptions of their interactions with their fellow participants were related to four components: actual interaction in courses, percentage of class-based discussion. discussion, discussion requirements, and average discussion response time. Graham and Scarborough (2001) reinforced Swan's findings when their survey determined that 64% of students thought it important to reach out to a group of students. Furthermore, Picciano (1998) found that students found learning from online courses related to the amount of discussion taking place in them. When students actively engage in an intellectual exchange with fellow students and instructors, students validate what they are learning in a course and articulate their current understanding (Chi & VanLehn, 1991).

(iii) **H3: Interaction positively affects user satisfaction.** From the above-mentioned theoretical basis and inheriting previous studies, the proposed research model is shown in **Figure 1**.

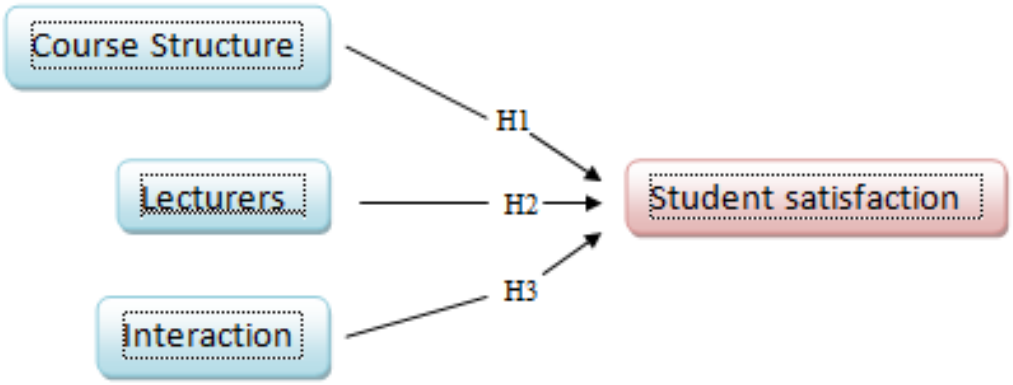

Figure 1. Research model of factors affecting online education satisfaction on digital teaching sites of students in Ho Chi Minh City.

From the research model of the topic, along with the scale that Nicholas Ashill and co-authors have researched before, they provide a draft scale to measure student satisfaction with online education on the teaching site. The number of universities includes course structure (3), faculty (5), interaction (2).

However, due to the difference between the educational background of each country and region, it is possible that the established scale is not suitable for the field of online education at universities in Vietnam. Therefore, it is necessary to use qualitative research to adjust the scale accordingly.

The data is collected by the author by the method of questionnaires designed on Google tools (Google form) and sent to the respondents through online tools such as email, social networks (forums, Facebook,). With this method, the author obtained 80 valid answer sheets.

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After collecting and eliminating unsatisfactory questionnaires, the author coded and entered the data, then the data were processed by SPSS software. The data of the study were analyzed through the following steps: scale reliability testing, ANOVA analysis, exploratory factor analysis, correlation analysis, and regression analysis.

3. RESULTS AND DISCUSSION

The results of Barlett's test show that there is a correlation between the variables in the population (sig = 0.000), and the coefficient KMO = 0.874 shows that factor analysis to group variables together is appropriate.

With an Eigenvalue of 1,139, 11 variables are grouped into 02 factors. The total variance extracted is 56,980, that is, the ability to use these two factors to explain for 11 observed variables is 56,980%.

From the results of the Rotated Component Matrix (a) table, there are no excluded variables, 11 variables are grouped into the following 2 factors:

(i) The first factor – Lecturer and interaction, including 7 variables: Instructor has actively participated in facilitating the course, Instructor has stimulated students' intellectual efforts beyond the requirements of the face-to-face course, The Instructor was responsive to student concerns, The Instructor provided helpful feedback on the assignment, the study interacted with the instructor frequently in the online course, the study interacted frequently with the instructor. interact with other students in the online course, the interaction between the lecturer and the students makes all the problems of the course better solved.

(ii) The second factor – Course overview, including 4 variables: The overall usability of the course Web site is very good, Course objectives are clearly communicated, Course materials are organized into logical components, the Instructor is very knowledgeable about the course.

The F test with Sig F = 0.000 < 0.05 shows that the built multiple linear regression model fits the data set.

After running multiple linear regression with the one-pass input method (Enter), we have R2= 0.583 and adjusted R2 = 0.572. That is, the multiple linear regression model fits the data set of 57.2%. In other words, about 57.2% of the difference in observed satisfaction can be explained by the difference of the two components in the adjusted research model.

Observing the normalized β coefficients, we see that both factors: Lecturer and interaction, Course overview, have a linear relationship with Student satisfaction with Sig t < 0.05.

The maximum variance exaggeration factor – VIF is 1,714 (in both variables X1 and X2), which tells us that there is no sign of multicollinearity (The rule is that when VIF exceeds 10, it is a sign of multicollinearity (Trong & Ngoc, 2008).

The multiple regression equation is defined as:

$$Y = 0.225 + 0.672X_1 + 0.303X_2$$

The results showed that student satisfaction = 0.225 + 0.672 (Faculty and interaction) + 0.303 (Course overview).

Both independent variables in the multiple regression equation have a significant influence on the dependent variable (with significance level Sig<0.05). And the coefficients of the variables in the equation all have positive signs, showing that both factors have a positive impact on student satisfaction, that is, we accept the two proposed hypotheses.

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From the above analysis results, it can be seen that student satisfaction with online education on the university's digital teaching page is most influenced by the factor Lecturer and interaction (β_1=0.672), followed by Course Overview (β_2=0.303).

The results also show that universities can influence the variables in the regression equation to increase student satisfaction about the quality of online education on the digital teaching site in the direction of improving the following factors.

The study started from the reference to the theories and previous research results, our team proposed a theoretical model to study the factors affecting the satisfaction of online education on the digital teaching site, includes 3 factors: Course Structure, Instructor, Interaction with 11 observed variables. Qualitative research is carried out through the technique of interviewing a group of students to discover, modify, adjust, and add observed variables to the scales.

Formal research is carried out through qualitative research to complete the questionnaire before conducting quantitative research by interviewing technique through detailed questionnaires. The number of samples collected is 80. Data after collection is processed by statistical software SPSS. The scale is preliminarily evaluated by Cronbach's Alpha reliability coefficient and tested by EFA exploratory factor analysis. Based on the analysis results, the originally proposed research model is adjusted. Then, our group put the adjusted research model's factors into the linear regression analysis and tested the suitability of the research model.

The research results show that the initial model from 3 factors, the remaining 2 factors are Lecturer and interaction, Course overview affects students' satisfaction with online education on the teaching site. learn numbers. Through these factors, educational institutions and organizations can find solutions to improve the quality of their education as well as improve student satisfaction for online education.

4. CONCLUSION

By synthesizing and analyzing the observed variables as presented in the above sections, we conclude that: student satisfaction depends on 2 factors. In which, the factor of Lecturer and interaction has the strongest impact, which is completely appropriate in the online learning environment when students always need to experience new knowledge and skills through the exchange process. with lecturers. Therefore, improving professional knowledge and improving teaching methods must be effectively implemented by lecturers. Teachers need to study the content of the lesson carefully to choose the key knowledge and teachers should spend time interacting with students anytime, anywhere. Besides, students themselves also need to actively interact with teachers to improve the quality of education.

On the school side, it is necessary to regularly upgrade and improve the online learning website, so the documents should be arranged in a scientific way to make the search easier.

However, all of the above is a foundation that requires students, lecturers, and management levels to work together to achieve the goal of improving the quality of online education on the digital teaching site.

5. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. The authors confirmed that the paper was free of plagiarism.

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