

## AN ANALYSIS OF PERCEIVED STUDENT BENEFITS IN E-LEARNING SERVICE CASE STUDY ON FPT UNIVERSITY

Truong, Nguyen Nhat  
Hieu, Vo Minh  
Quoc, Tran Hoang Anh

### ABSTRACT

*FPT University business program is offering the E-learning service, which is called Learning Management System (LMS) course as an assisting service to on-site classes. This research aims to explore the components of Student Perceived Student Benefits when using e-learning service. The theoretical model is based on model of Forsythe et al, (2006) and combined with 2 more components to fit the current situation at FPT University. Finally, the research addresses and analyzes the total six components, which are Convenience of Learning, Learning Selection, Ease of Learning, Hedonic Learning, Customization and Personalization. The outcome shows that there are two most significant components that make up the Student Perceived Student Benefits are Learning Convenience and Learning Selection. The results of the verification of measurement models show that the scales achieve acceptable reliability and qualified value. The research methodology includes qualitative and quantitative methods. A formal quantitative study with a valid sample of 310 students - who are studying at FPT University and using LMS service - was conducted from January to April in 2017 to test the scale models and theoretical model. The results contribute to the theory of Student Perceived Student Benefits through a model of Student Perceived Student Benefits in the Vietnamese Universities. Finally, the outcome helps the school managerial levels understand the components of Student Perceived Student Benefits better. Based on the outcome, it also suggests some managerial implications design and orients programs as well as improves LMS online course features for better performances. Furthermore, if this study could be conducted in the larger amount of universities which also have the equivalent online course, the result would be much better and have a clearer view on E-learning service in Vietnam.*

**Keywords** — Student Perceived Student Benefits, E-learning service, Course Selection, Convenience of E-learning, Ease of Learning, Hedonic Learning, Customization and Personalization.

### 1. INTRODUCTION

FPT University was found in 2006. The school aims to become a mega-university with smart education technology applied to raise the teaching and learning methods and quality to reach the goal of 100,000 students in 2020 including 15% foreign students. Following that vision, the school develops ceaselessly, and the online system is the necessary thing to enhance the education service quality. LMS at FPT University is a free online management system. All of student learning at FPT University have to log in to LMS at school to do quizzes, assignments, task and similar things. By this online system, the students can update information, course description and live announcement. Although currently, almost universities in Vietnam have become aware of the importance of the benefits that student could gain when learning online, in Vietnam there are not several further research on the components that make up the Perceived Benefits to the students on the E-learning system. The previous research just stopped at considering the “Perceived Benefits” as a manifest variable which can be directly measured or observed, not having focus on investigating “Perceived Benefits” ranked by which components.

This research topic provides some practical implications for universities using LMS system, market research companies, marketing researchers, faculty and students in the marketing field and business administrators. In particular:

The first, in terms of research method, this research contributes to the service measurement system in the world by adding a measurement scale of Perceived Benefits in E-learning for Vietnamese university. It helps the researchers in the field of educational services to build a scale system to carry out their research in E-learning system. Additionally, it plays an important role in the field of international marketing research because, at present, one of the difficulties in this field of research is the lack of a system of specific country scales to establish equivalent systems (Craig and Douglas, 2005), especially in developing countries like Vietnam.

The second, the researchers in the field of marketing can use, adjust, and supplement these scales for their research in E-learning and digital marketing. More importantly, this study suggests the Perceived Benefits should be measured as a latent variable in research. The reason is that all respondents can understand as latent variables by their own different understandings. Specifically, it is noticeable that when measuring Perceived Benefits, researchers must measure with multiple components and all components must be measured by multiple observed variables.

The third, business grasp the criteria that make Perceived Student Benefits to their students; universities could be easier to create their competitive advantage, thereby meeting the demand from student. According to Kotler and Armstrong (2012), they believed that when businesses understand the benefits customers receive they will help businesses segment their consumers based on segmentation benefits. Along with the development of society, the needs of customers are also increasingly higher; especially the

demand for online interaction has increased over recent years. E-learning system that meets the expectations of that Perceived Student Benefits will create a competitive edge for them.

As mentioned, in this research, therefore, researchers will consider "Perceived Student Benefits" as a latent variable, and study which components represent for "Perceived Student Benefits" variable. So, the purpose of this study is not only identify clearer which components contribute to the Perceived Student Benefit, but also propose an integrated model which could explain the purchase intention of consumers. The research questions are listed as follows:

- What components creating the Perceived Student Benefits for e-students?
- Which is the strongest and weakest component that makes up the Perceived Student Benefits?
- What should the school do to improve Perceived Student Benefits for e-students?
- What is the difference between male and female in Perceived Student Benefits?

## 2. THEORETICAL BASIS & LITERATURE REVIEW

### 2.1 Literature review

According to American Marketing Association (2013), defines services is referred as activities, benefits and satisfaction offering for sale or providing in connection with the sale of goods. For more detail, in economics and marketing, a service is the non-material equivalent of a good. In terms of service provision, it has been demonstrated as an economic activity which does not result in ownership, and this is core difference between providing service and physical goods.

Regarding Electric-learning (E-learning), an E-learning or learning management system (LMS) is believed a platform that provides holistic environments for delivering and managing educational experiences. It includes suites of tools that support online course creation, maintenance, and delivery, student enrollment and management, education administration, and student performance reporting. (Declan et al, 2007)

However, there had been so many struggles relating to e-learning matter for years (Moore, Dickson-Deane and Galyen, 2011). These assumptions materialize; however, some through conflicting views of other explanation, and some just by simply comparing the e-learning's characteristics with other existing terms. Particularly, Ellis (2004) disputes with Nichols (2003) who defines e-Learning as strictly being accessible using technological tools: web-based, web-distributed, or web-capable.

Because the battle is still, some authors provide either no clear definition or a very vague reference to other terms such as online course/learning, web-based learning, web-based training, learning objects or distance learning believing that the term can be used synonymously (Dringus & Cohen, 2005; Khan, 2001; Triacca et al., 2004; Wagner, 2001).

In educational perspective, Sigmon (1979) defined service-learning as an experiential education approach that is premised on "reciprocal learning". He proposed due to learning flows from service activities, both those who provide service and those who receive it "learn" from the experience. In Sigmon's view, service-learning occurs only when both the providers and recipients of service benefit from the activities. Sigmon (1979) also added that unlike a field education program in which the service is performed in addition to a student's courses, a service-learning program integrates service into the course(s).

In the background papers prepared by the WTO for ongoing negotiations, education services are viewed as falling into five main categories: (1) Primary education, (2) Secondary education, (3) Higher education, (4) Adult education — In this paper, we will focus on this education level. The teaching of practical skills in postsecondary, sub-degree technical, and vocation education institutions; and education services provided by universities, colleges, and specialized professional schools; (5) Other educational services

Additionally, Association for Service-Learning in Education Reform (ASLER, 1994) depicted service-learning as a method of learning that enables school-based and community-based professionals "to employ a variety of effective teaching strategies that emphasize student-centered or youth-centered, interactive, experiential education. Andrew (1996) described service-learning programs are distinguished from other approaches to experiential education by their intention to equally benefit the provider and the learners as well as to ensure equal focus on both the service being provided and the learning that is occurring.

E-learning may be delivered via blend of asynchronous and synchronous technologies. Synchronous e-learning service consists of real-time interaction between learners and teacher/ mentor, supporting by various technological tools such as video conferencing, teleconferencing, chat rooms and other services. In contrast, asynchronous e-learning service is a self-study form that may be supplemented by non-real time interaction with the instructor, for example through email, voicemail, message boards, forums, and threaded discussions. The e-learning service of this study is an asynchronous Web-based learning system, supported by non-real time interaction with the instructor through email, message boards, and forums. (Chiu et al, 2005).

Regarding Perceived Benefit, Gellman and Turner (2013) postulates that perceived benefit is related to the perception of the positive results that are caused by a specific action. In the medical field, Perceived Benefit is usually deployed to describe an individual's motivation for performing and adopting a treatment. According to Forsythe et al. (2006), in e-commerce field, Perceived Benefit indicates about what customers gain from online shopping. In another explanation, according to Chandon et al. (2000), he portrayed that Perceived Benefits relate to the positive results associated with a behavior in response to threats including real and perceived threats.

In 2006, Forsythe et al. in the research - Development of a scale to measure the Perceived Benefits and risks of online shopping - inferred that online shopping had four main perceived benefits: (1) Shopping Convenience; (2) shopping selection; (3)

ease/comfort of shopping; and (4) hedonic. Because there are some previous studies that are related and similar to this matter, this study develops the model to the educational field, especially in E-learning service.

In terms of Shopping Convenience, Williams (1978), Nickols and Fox (1983) defined that Shopping Convenience is related to saving time and effort consist of physical and mental effort. In this research, Shopping Convenience is considered as E-learning convenience. So, this term is seem to be a convenient level of saving time and effort for student to study online rather than common on-site classes.

Similarly, Shopping Selection term is switched to Course selection. Forsythe, et al., (2006) stated that Shopping selection is defined as the availableness of a majority of merchandise; brand choices and product information for the customer in making decision process. Then, Course Selection means the wide choice of online study course that student can choose to join.

As regards Ease of Shopping, Ease of Shopping is level of ease of using website, finding way to buy and the level of clear and understandable of sites (Deane et al., 1998). Besides, Bhatnagar and Ghose (2004); Eastlick and Feinberg (1999); Korgaonkar and Wolin (2002) claimed that Ease of Shopping which is the thought of avoiding the physical and emotional hassles while consumers go shopping in other channels. In this case, Ease of e-learning indicates the level of finding way to choose the online course without any complication, difficulty and misunderstanding during the process.

The last one is hedonic. Hirschman and Holbrook (1982) postulated the hedonic motive is related to consumption behaviors in search for happiness, fantasy, awakening, sensuality, and enjoyment. In addition, social and emotional need for enjoyment, shopping experiences is a nonfunctional motive, also called Hedonic of shopping (Forsythe et al., 2006). Equally, in a model of motivation for adult education and training, Carré (2001) summarizes ten patterns of participation motives. In those definitions, hedonic is a level of pleasure from the space and materials available in the educational background setting.

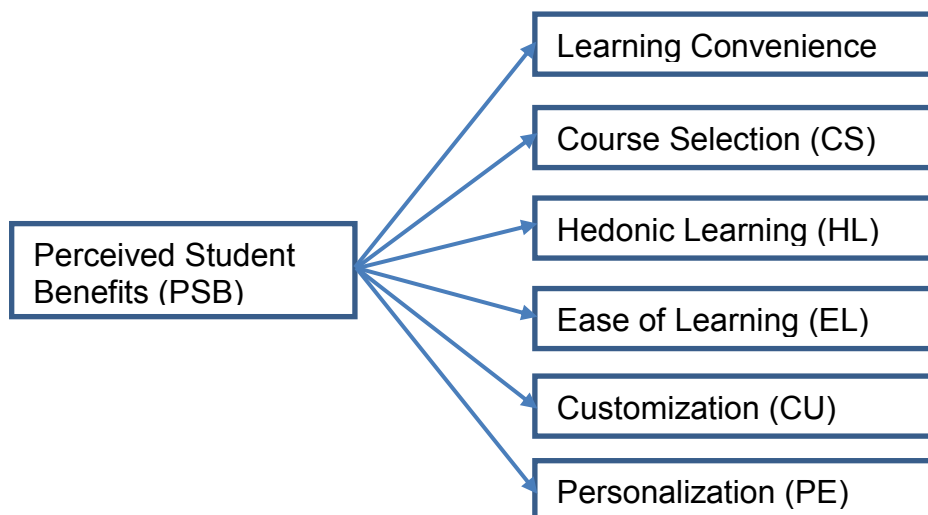
Interestingly, A Framework for Cyber-Enhanced Retailing: Integrating E-Commerce Retailing with Brick-and-Mortar Retailing. Electronic Markets was studied by Chung (2000). He indicated that individualized experience is also the component relating to Perceived Benefit in shopping online. In other words, Personalization in e-commerce is related to the service matching and advertising content to each individual based on their favorites (Turban et al., 2011). According to Deitel et al. (2001), Personalization as utilizing tracked, mined information and data analysis to configure a consumer's interaction with products, services, websites and employees of the company. Personalization is also understood as the supply to a single individual of suggested products, services or information related to products or services (Mulvenna et al., 2000). So, by educated circumstance in this study, Personalization in E-learning is perceived as the matching level of the course suggestion to each student based on mined data which are study field, favorite class, and favorite teacher and other similar things.

Furthermore, To et al (2007) conducted a research - Shopping motivations on Internet: A study based on utilitarian and hedonic value - found that utilitarian motive is a determinant of shopper expectation to search and purchase intention. More detail, utilitarian motivation is represented through convenience, cost saving, information availability, selection and customized products or service. As concerns customized products or service, Customization in e-commerce is to allow for easy self-configuration or design products by the consumer way (Turban et al., 2011). Piller (1999) asserted that customization is related to co-design process of products and services to meet the needs of each individual consumer regarding specific product features. Consequently, customization in E-learning is the student's configuration on online study course to meet their prefer study schedule. It helps the e-student feels more comfortable and free to design for their own course on the LMS.

## 2.2 Proposed model

After studying the previous related research as well as implementing quantitative research, research team finds that Perceived Student Benefits when study online is formed from 6 main components: Learning Convenience, Course Selection, Hedonic Learning, Ease of Learning, Customization, and Personalization. These components are the motives for students and make students feel beneficial to learning through LMS. The model was suggested below

Figure 2.1: Proposed model



### **Learning Convenience**

In terms of Learning Convenience in Educational Service, students feel beneficial when they do not need to come to on-site classes. Learning is easier for e-learner due to saving time and its availability all the time. The more convenient, the better benefit students gain. So, it contributes to grow the PSB.

### **Course Selection**

Regarding Course Selection, it shows the range of choices for students to learn, to choose academic services and to comprehend easily the course description. Hence, it helps to build the PSB as well.

### **Hedonic Learning**

One of the reasons that make student interested in learning online is the experience. The new experience of learning stay far away from school also produce more benefit to students. It absolutely enhances the pro-active learning process and seemingly the benefit for e-learners.

### **Ease of Learning**

In order to raise higher PSB, the experience when using the system must be clear and understandable. The process is clear and no obstacles during the learning progress would give to PSB.

### **Customization**

Students could control their schedule in the semester actively and setup for their own long-term study plan through customization. Hence, this is definitely one of the components that make up the PSB. Universities should let the students involving in course design by themselves. However, universities could consider the extra-cost for customization because it could affect badly to PSB.

### **Personalization**

Building learning online system, the quality of content and the website's AI intelligence also contribute to gain higher PSB. Suggesting the content personally based on the student device, operating system, their own preferences or similar things strongly create the PSB.

## **3. METHODS AND DATA**

### **3.1 Research Approaches**

Authors deploy qualitative and quantitative research in this study.

The qualitative research adds, adjusts the scale to suit the topics, with some research questions and information gathered through unstructured interviews. Because this method creates a comfortable atmosphere for the person who took the interview, therefore, the results are more accurate. Information may be adjusted appropriately during the collection process when the new information appears. The survey participants were eight people who had been using the LMS system to study online.

Authors deploy quantitative research to measure the scale, test the theoretical model showing the relationship between each component in the scale. Quantitative research allows the authors quantify and measure information collected by specific numbers. The data was gathered from a questionnaire survey by Likert 5-Scale (Totally Disagree to Totally Agree) from the interviewees. The authors used SPSS and AMOS software to perform the analysis: reliability test, independent t-test, EFA, CFA, and SEM test.

### **3.2 Data**

In this research, the authors utilize primary data. There are many methods of collecting primary data: observations, mail interviews, live interviews, fixed group surveys. Regarding the In-deep interview, the authors invited the expert who is Dean of Business sector of FPT University attends the meeting in a private room at FPT University to implement the face-to-face interview. The first step, the researchers starts the conversation by the introduction of this topic for the expert understands what will be going on. The second phase, researchers begin with some warm-up questions related to e-learning. In a final step, group research implements the series of open questions for the expert to collect the main point and the big picture of e-learning service in Vietnam, especially the benefits that bring to students. Group research has sketched out some main Perceived Student Benefits on the E-learning market nowadays. In the end, the authors draw a conclusion that it has six main components that may contribute to the creation of Perceived Student Benefits. Getting the more precise questionnaire for the pilot test and official questionnaire, group research implements the focus group discussion to recheck and adjusted questions from the previous foreign research.

In Group discussion, the authors have invited eight people who purchased online and they also present for various course to discuss those six components again. The survey found that participants who responded to the qualitative questionnaire showed a high level of interest and appreciation of the quality of service, the value of feeling, trust, and confidence, familiarity, the reputation. Moreover, they also perceive the benefits when using LMS system such as choose course, schedule, wide selection; enjoyment and the guide on e-learning websites are easy to follow to study. After constructing the questionnaire for the official quantitative questionnaire, the authors also consult the expert and eight people from group discussion about the quantitative survey to fix some incorrect grammar, vocabulary for respondents to understand every single question in the survey easily. After many verified steps by an expert, the official survey is distributed. The main data of this research is collected from the quantitative research by 310 respondents by Judgmental Sampling technique.

### 3.3 Data Processing

In this research, the authors use SPSS to analyze EFA and Cronbach's Alpha ratio which is reliability ratio used to estimate correlation scale. Besides, the group also deploys AMOS to run to reduce observed variables to a smaller set but still maintain almost information content; Confirmatory factor analysis (CFA) to clarify evaluation criteria. Afterward, authors run the SEM model test to estimate measurement error and the abstract relationship between variables.

## 4. ANALYSIS & FINDINGS

### 4.1 Descriptive information

A total of 310 valid surveys were received. This study adopted judgmental sampling to minimize the bias of the sample. Over a half of the respondents (54.8 percent) were female. The majority of respondents were Software Engineering students (54.5%). In addition, the largest proportion was freshman (37.4%), followed by sophomore students (22.9%). Junior student is the least amount with just only 18.7%.

### 4.2 Mean value

Table 4.1: Mean and Standard Deviation value

|                             | Mean   | Standard Deviation |
|-----------------------------|--------|--------------------|
| <b>Learning Convenience</b> | 3.4110 | .90608             |
| <b>Course Selection</b>     | 3.1653 | 1.00095            |
| <b>Hedonic Learning</b>     | 3.0935 | .95993             |
| <b>Ease of Learning</b>     | 3.1452 | .93514             |
| <b>Customization</b>        | 3.4968 | .95021             |
| <b>Personalization</b>      | 2.7532 | .98717             |

Although the Standard Deviation from all components is relative high (near to 1), the mean value scores are capable to see what are believed to benefit most by student's evaluation. So, these values are merely used to identify which weights are good or bad at the present for the school to improve e-learning service performance better.

As can be seen that the result shows all mean value are relatively neutral, so it indicates students are still not satisfied with e-learning service in school. Significantly, Customization is highest evaluation from students. In which, item CU3 - "Online learning configures exactly what I want." is highly rated with 86% (both agree and totally agree). Therefore, the school could consider the customization function on e-learning system. Besides, the mean score from component Personalization is lowest in 6 components. For more detail, item PE4 - "I appreciate suggested external blogs and forums preferences relating to my study major." is the most unsatisfied from students. Suggested extracurricular, program or soft skills course, therefore, needs to be precise.

### 4.3 Cronbach's alpha - Reliability Test

The survey's analysis shows that all components have the good Cronbach's Alpha coefficient (larger than 0.7). (Hair et al., 1998)

Table 4.2: Cronbach's Alpha Result

| No. | Component | No. of Initial items | Cronbach's Alpha | No. of Deleted items | Deleted items |
|-----|-----------|----------------------|------------------|----------------------|---------------|
| 1   | LC        | 5                    | 0.882            | 0                    | -             |
| 2   | CS        | 4                    | 0.875            | 0                    | -             |
| 3   | HL        | 5                    | 0.799            | 2                    | HL4, HL5      |
| 4   | EL        | 4                    | 0.877            | 0                    | -             |
| 5   | CU        | 6                    | 0.895            | 2                    | CU5, CU6      |
| 6   | PE        | 4                    | 0.899            | 0                    | -             |

### 4.4 Exploratory Factor Analysis

Table 4.3: Main coefficients of KMO test

| Coefficient                 | Value   |
|-----------------------------|---------|
| <b>KMO</b>                  | 0.878   |
| <b>Sig. in Barlett Test</b> | 0.000   |
| <b>Eigenvalues</b>          | 1.243   |
| <b>Extracted Variance</b>   | 74.415% |

After running EFA, the result also extracts to 4 components at Eigenvalues is 1.243 and Extracted Variance is 74.415% > 50%. KMO value is 0.878 > 0.5; the Sig. the value in Barlett Test is 0.000 < 0.050, so the exploratory factor analysis is suitable for investigating officially.

Besides, the Eigenvalues is 1.243 > 1 (Hair et al., 1998) indicates the variability explained by each factor and that factor can represent for the whole group (Table 4.1). Also, the extracted variance is 74.415% > 50% means the model is standard for factor analysis.

Table 4.4: Component groups of KMO test

|     | Component |      |      |      |      |      |
|-----|-----------|------|------|------|------|------|
|     | 1         | 2    | 3    | 4    | 5    | 6    |
| LC1 | .824      |      |      |      |      |      |
| LC4 | .793      |      |      |      |      |      |
| LC3 | .786      |      |      |      |      |      |
| LC2 | .749      |      |      |      |      |      |
| LC5 | .697      |      |      |      |      |      |
| CU2 |           | .899 |      |      |      |      |
| CU1 |           | .835 |      |      |      |      |
| CU3 |           | .832 |      |      |      |      |
| CU4 |           | .787 |      |      |      |      |
| PE2 |           |      | .907 |      |      |      |
| PE3 |           |      | .901 |      |      |      |
| PE1 |           |      | .883 |      |      |      |
| PE4 |           |      | .763 |      |      |      |
| EL3 |           |      |      | .824 |      |      |
| EL2 |           |      |      | .801 |      |      |
| EL4 |           |      |      | .795 |      |      |
| EL1 |           |      |      | .773 |      |      |
| CS4 |           |      |      |      | .791 |      |
| CS1 |           |      |      |      | .736 |      |
| CS2 |           |      |      |      | .716 |      |
| CS3 |           |      |      |      | .679 |      |
| HL1 |           |      |      |      |      | .837 |
| HL2 |           |      |      |      |      | .774 |
| HL3 |           |      |      |      |      | .744 |

The EFA's result shows 16 observed variables are classified into six different groups, and the Factor Loadings of all variables are more than 0.5 which meets the conditions to investigate officially.

4.5 Confirmatory Factor Analysis

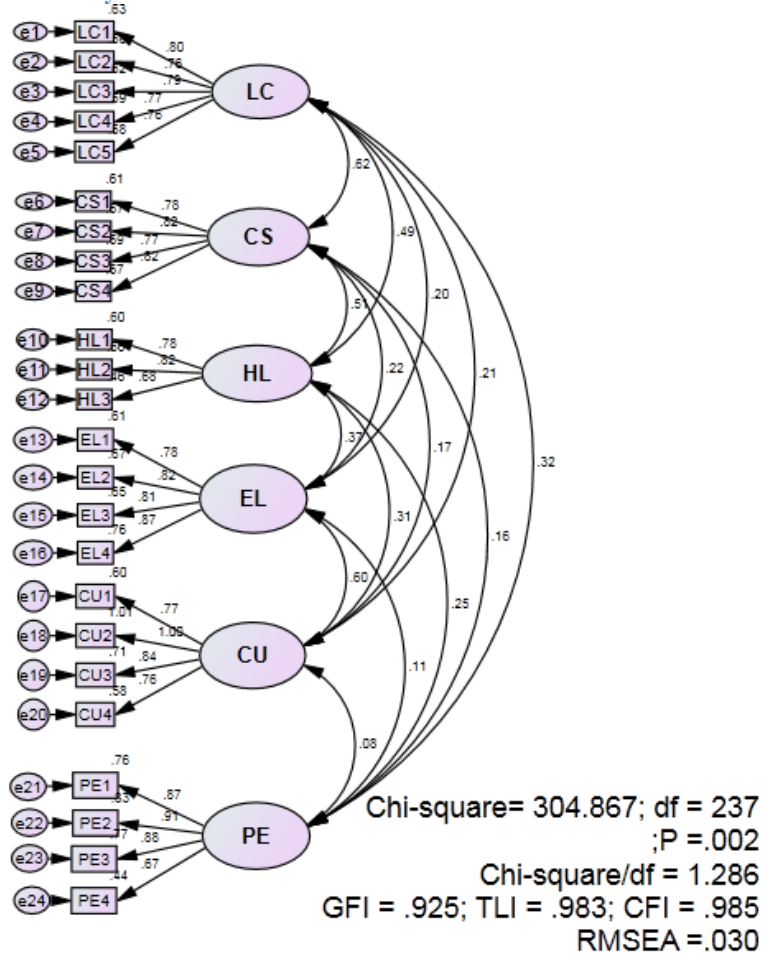


Figure 4.1: CFA result - Perceived Student Benefits (Standardized)

To measure the fit of the model with market's information, this study uses the indicators Chi-square, GFI (Good of fitness index), CFI (comparative fit index), TLI (Tucker and Lewis index) and RMSEA (root mean square error approximation). The CFA's result shows in Figure 4.6. This model has 237 degree of freedom, Chi-square = 304.867 with p-value = 0.00. The other criteria indicate that this model is fit with the market's data: CFI = .985, TLI = .983, GFI = .925, RMSEA = .030.

The correlation coefficient between the components and the standard deviation (Figure 4.6) shows that these coefficients are all less than 1 (statistically significant). Therefore, all the elements Learning Convenience, Course Selection, Hedonic Learning, Ease of Learning, Customization and Personalization reach the distinct values (Estimate < 1)

4.6 Structural Equation Model (SEM)

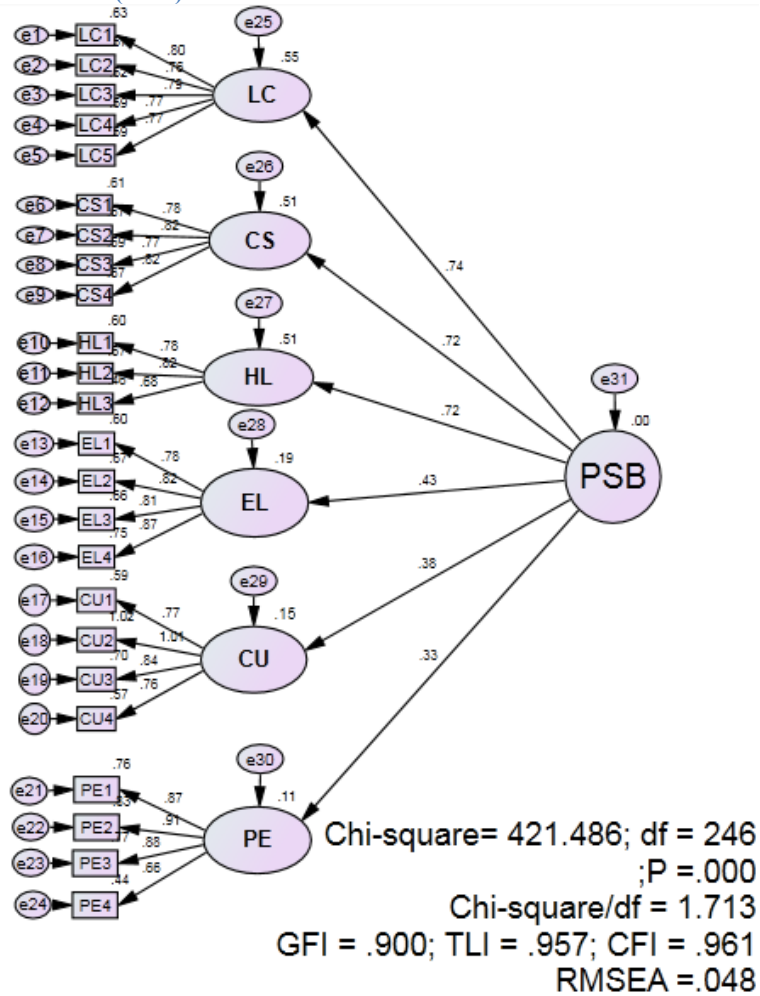


Figure 4.2: SEM result - Theoretical Model (Standardized)

SEM model describes that Perceived Student Benefits variable is observed by six components: Learning Convenience, Course Selection, Ease of Learning, Hedonic Learning, Customization and Personalization.

Table 4.4: Result of main parameters (standardized)

| Relationship | Estimate |
|--------------|----------|
| CS ← PSB     | .717     |
| LC ← PSB     | .742     |
| HL ← PSB     | .716     |
| PE ← PSB     | .325     |
| EL ← PSB     | .433     |
| CU ← PSB     | .382     |

(Source: authors)

Learning Convenience (LC) is the component that most contribute to create Perceived Student Benefits for students when study online, which followed by Course Selection (CS).

4.7 Independent t-test

This independent-samples t-test assesses whether the means of Perceived Benefits components variable differs on genders.



Table 4.5: T-test result of Perceived Student Benefits components between genders

| Test variables              | Sig. of Levene Test | Sig. of T-Test             | Result              |
|-----------------------------|---------------------|----------------------------|---------------------|
| <b>Shopping Convenience</b> | 0.026               | Equal variance not assumed | 0.395 Accept        |
| <b>Shopping Selection</b>   | 0.077               | Equal variance assumed     | 0.968 Accept        |
| <b>Hedonic Shopping</b>     | 0.874               | Equal variance assumed     | 0.643 Accept        |
| <b>Ease of Shopping</b>     | 0.718               | Equal variance assumed     | 0.290 Accept        |
| <b>Customization</b>        | 0.983               | Equal variance assumed     | 0.043 <u>Reject</u> |
| <b>Personalization</b>      | 0.415               | Equal variance assumed     | 0.439 Accept        |

(Source: authors)

The result in Table 4.5 shows that the sig. The value of Levene's Test is over than 0.05. Then, the sig. value in line "equal variances assumed" is valid and is used to check the hypothesis. Next, the t-test's sig value is  $0.043 < 0.05$ , so it means that the null hypothesis is rejected and there is a significant difference in mean between genders on Customization.

Table 4.6: Significant difference in mean between genders on Customization

| Component            | Gender | N   | Mean   |
|----------------------|--------|-----|--------|
| <b>Customization</b> | Male   | 140 | 3.3768 |
|                      | Female | 170 | 3.5956 |

(Source: authors)

According to Table 4.6, the result indicates the difference in mean between genders on Customization. In general, Female tend to customize their studying to fit their preferences than male do (3.5956 and 3.3768 respectively)

## 5. IMPLICATION AND CONCLUSION

### 5.1 Key findings

The results showed that all items reach reliability level and qualified ratio after addition and adjustment. In this study, there are six components that are Learning Convenience (LC), Course Selection (CS), Hedonic Learning (HL), Ease of Learning (EL), Customization (CU), and Personalization (PE). Besides, another key finding is the significant difference in mean of Customization between male and female during the online study process.

### 5.2 Conclusion and Recommendation

This study's result indicates that Learning Convenience (SC) is the highest perceived student benefit during online study. The findings are also accordance with the expectations as well as the previous research related to Perceived Benefits. According to Forsythe et al. (2006) research's result, the convenience is also the first and the main component contributing to Perceived Benefits creation. Besides, Li et al., (2006) also find out that convenience benefit is one of top 3 benefits associated with online buying behaviors. Similarly, Tsai et al., (2011) postulate convenience benefit has significant positive influence on consumers' attitude toward group buying. Also, convenience is the only one of the strongest motives examined by past catalog shopping research (Jasper and Lan, 1992; Korgaonkar, 1984; Gillett, 1970). Therefore, it is obviously seen that convenience is the main element that stimulates consumers not only shopping but also studying online.

Besides, this study focuses on PSB and presents some new and significant findings, and also supports previous research. As a two-fold methodology, this paper involves a review of the literature on e-learning and the interview with an expert. Particularly, it finds out that six components contribute to Perceived Student Benefit; these are Learning Convenience, Course Selection, Hedonic Learning, Ease of Learning, Customization and Personalization. Then, identifying factor helps the university to improve performance better. In addition, the general mean score of components are quite neutral, so it implies that the Perceived Student Benefits from online learning of FPT University still not appreciated by most students.

The first, Learning Convenience, has a significant contribution to Perceived Student Benefit on learning online. Therefore, FPT University should continuously maintain and upgrade the LMS system in order to encourage e-students enrolls because students prefer this study approach. The second point is the reverse pattern of Personalization component. It contributes the least to the Perceived Student Benefit on e-learning service. To develop this component, FPT University should pay attention to some sections because students tend to personalize their learning experience. Besides, the school should invest more function tools, themes, and more other similar things to improve the learning experience. Importantly, the improvement of learning experience also contributes

to the student's result and satisfaction. Hence, universities should empower more not only to inferior levels such as Training Department, Mentors but also to students. It enhances the autonomy function and lets students control their progress better.

Furthermore, the third finding in this research is related to explore the significant difference in mean on Customization between Male and Female. Therefore, the school should focus on the customization functions or tools for female, so let them have more choices to customize than male. Actually, women are likely to spend much more effort to choose and design to fit rather than men do. Thus, e-businesses should consider "Customize" features in the website to attract women more. It also helps the school retain students especially women learners and increase satisfaction. In fact, at FPT University, the amount of male students (roundly 70 - 80 percent) is always believed to be overwhelmed female in Software Engineering sector. Regarding Business sector, the pattern is completely reversed with approximately 70% in terms of female. By the above result, therefore, researchers suggest having different online platforms for each major.

To summarize, it is also important to consider the major limitations of this study. The sample size is considerably small because this study is not executed from various schools in the country. Hence, it would be more applicable to have a big picture of E-learning if the research is investigated with bigger scale. In the future, the research can compare and develop a scale system for more components that make up the Perceived Student Benefits in education online service.

## APPENDIX

### Survey Items

All items were scored on Likert scale which includes 5 levels from 1 to 5 means respectively from "Definitely Disagree" to "Definitely Agree" with formulations in the questionnaire.

### Learning Convenience

1. Online learning helps me in avoiding crowds in on-site classes.
2. Online learning saves me time.
3. Online learning can be implemented when the school is closed.
4. Online learning does not require me to leave my place.
5. I can get important announcements instantly through online learning system easier.

### Course Selection

6. Online learning helps me in accessing many academic services.
7. Online learning helps me in accessing many courses.
8. Online learning is available for me to study from everywhere.
9. I can get enough course detailed profiles to support my class selection.

### Hedonic Learning

10. Online learning makes me feel like I am in my own studying site.
11. I find online learning interesting.
12. To me, online learning is an adventure of studying.
13. I have control over my online learning process.
14. When learning online I feel in control.

### Ease of Learning

15. Learning online is clear and understandable
16. No hassles.
17. I do not have to wait to study.
18. When learning online, I would not be embarrassed if I did not get good mark.

### Customization

19. Online learning allows me to customize courses to my needs.
20. Course self-design makes me feel my personal characteristics.
21. Online learning configures exactly what I want.
22. Got me involved in the process when LMS adjusted to fit my desires.
23. Customization service makes me wait long time to start my course.
24. Customization service results in higher tuition for my study.

### Personalization

25. I appreciate personalized selected notification for me based on information that I have voluntarily given out such as study major, studying courses, present lecturer and similar things.
26. I appreciate LMS that are personalized for my usage experience preferences
27. I appreciate LMS that are personalized for my device (e.g. computer, tablet, mobile phone etc.), browser (e.g. Netscape, Internet Explorer) and operating system (e.g. Windows, Unix) that I use.
28. I appreciate suggested external blogs and forums preferences relating to my study major.

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*Truong, Nguyen Nhat*  
*FPT University*  
*Ho Chi Minh City, Vietnam*

*Hieu, Vo Minh*  
*FPT University*  
*Ho Chi Minh City, Vietnam*

*Quoc, Tran Hoang Anh*  
*Ho Chi Minh City, Vietnam*