

Satisfaction of Students on the Quality of Training Services in Private University in Vietnam

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Abstract

In recent years, students' feedback in Vietnam has been increasingly focused more often with research studies using quality service form to measure student satisfaction. This study was conducted to determine the factors affecting the satisfaction of the quality of training services at private universities in Vietnam. Some of the methods of analysis used in the study are the following: descriptive statistics, check the reliability of Cronbach's Alpha factor analysis, Exploratory Factor Analysis, regression analysis. The results show that lecturers, staff, training program, facilities, cost, school reputation and utilities affect student satisfaction on the quality of training services. On the basis of this finding, the author proposes policy implications for private universities.

Keywords: Exploratory Factor Analysis (EFA), Student satisfaction, Cronbach's Alpha, Private universities.

1. Introduction

For a long time, education in general and higher education in particular has always been a hot topic that has attracted the attention of the press, social commentators as well as experts and leaders. Previously, higher education was viewed as a high quality and non-profit human resource training for the country, but today the activity has gradually changed to become an educational service. Accordingly, learners can spend money to use educational services. Along with this trend is the birth of private universities.

In Vietnam, under the influence of the market economy, many higher education institutions are born to meet the learning needs of the society. As a result, the quality of training and the satisfaction of learners at these educational institutions, especially private higher education institutions, arise.

In recent years, students' feedback in Vietnam has been increasingly focused more often with research studies using quality service form to measure student satisfaction. These studies are conducted in two main directions. The first concerns the quality of all higher education related activities (Havey, 2003; Hill, 2005; Leckey and Neill, 2001; Gruber et al., 2010). The second focuses on the detection and verification of the relationship between the quality of higher education and the satisfaction of students through SERVQUAL or SERVPER form. (Nguyen Tran Thanh Binh, 2009; Nguyen Thanh Long, 2006; Nguyen Viet & Nguyen Khanh Duy, 2005).

In general, within the limits of the information and materials accessible to the author, local studies agree on the need for student satisfaction research in the quality of higher education. However, there is no agreement on the model and scale of quality, the unclear method of implementation, and the way to analyze. More specifically, no studies have been conducted for private universities.

Based on this, this study was conducted to determine the factors affecting the satisfaction of the quality of training services at private universities in Vietnam. The study was designed in 5 parts. Following part 1 of the introduction, part 2 will present literature review and empirical studies on the quality of higher education services. Section 3 discusses the research methodology. The results of the study and the discussion will be presented in Section 4. Based on the results of the study, the author will present policy implications in section 5.

2. Literature review and empirical studies

2.1. Literature review:

2.1.1. Education services:

According to Snipes, R.L. & N. Thomson (1999), university training is a special product, as it can increase the production of wealth in the future. Higher education services have the same characteristics as all other personal consumption services, which are invisible, can be consumed immediately but have some characteristics that other services don't have. It can be personal knowledge, or knowledge that people can achieve. Training services may also be to increase the number of classrooms, to improve the quality of support services for learning facilities and academic facilities such as the formation of university campuses, the number of stores provide services to students (entertainment, shopping, travel services, etc.).

2.1.2. Quality educational services

Harvey (1995) and Hill (1995) have launched the elements of quality educational services such as library services, equipped computer laboratory, food services, housing services, subject content, personal contact with staff departments, teaching methods, the involvement of student, etc. in a university to investigate the perceptions of students with regard to the quality of service provided by the school.

Hoang Thi Phuong Thao and Huang (2006), based on the theoretical basis of Harvey (1995) and Hill (1995), looked at the three basic elements of service quality through the study of the economic university students: (1) training activities: training programs, subject content, teaching methods, exam organization, student assessment, (2) infrastructure: the existing infrastructure of the school serving the process of teaching and learning (computer laboratory, library, learning and teaching equipment). (3) the service support and service: includes the aspect of student support services (food services, financial aids, health care, career advice) and the serving style of the faculties, departments and functions of the school. This theory was used as the basis for research.

2.2. Empirical studies

The world has many research about the satisfaction of students, below are some research forms:

Ahmad Jusoh (2005) studied the quality of training services at the university according to the perspective of students through the use of scale HEDPERF with 6 research components include: tangible medium, the capability of service, attitude, training programs, express opinions, reliability. Research results showed the capacity, training programs, the attitude and the confidence level that impact the quality of training services.

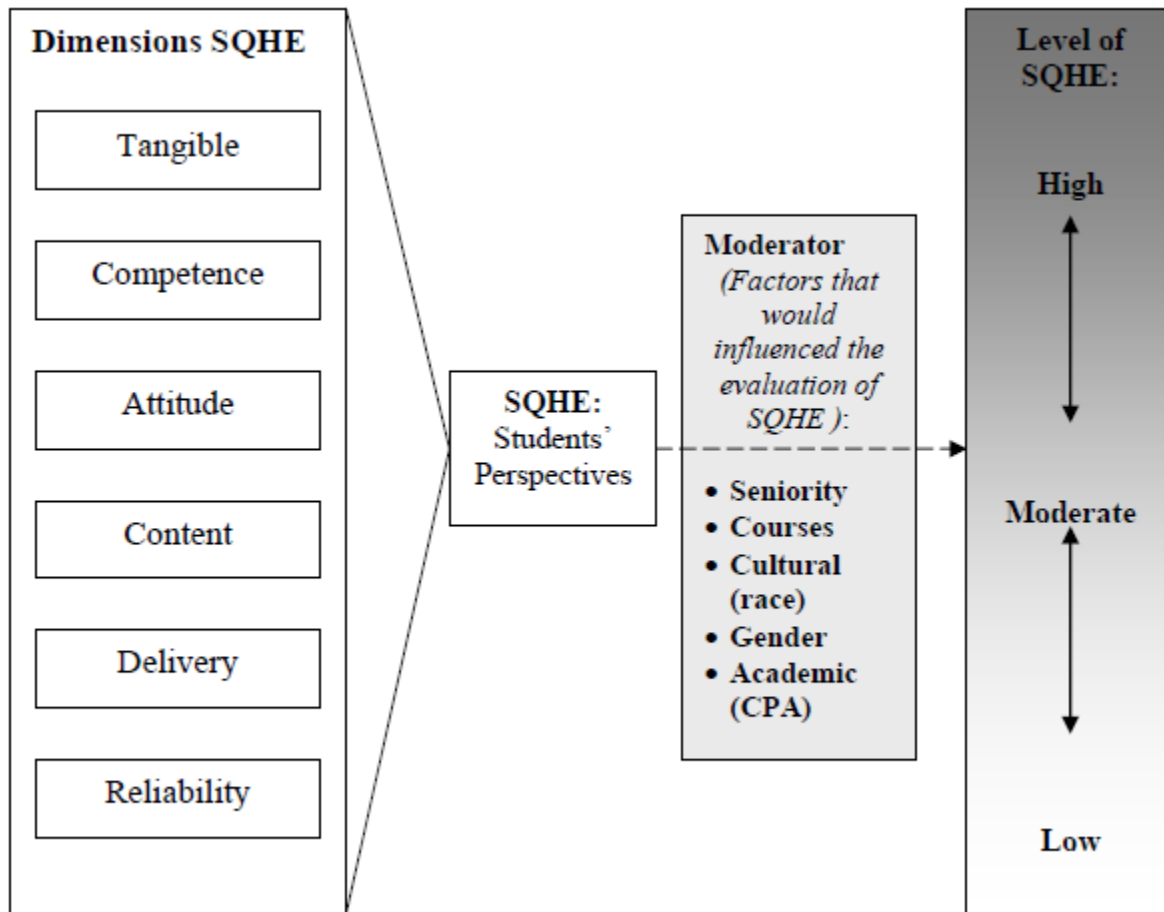


Figure 1: Service quality research model in higher education (Source: Ahmad Jusoh, 2005)

Ashim Kayastha (2011), did research on the satisfaction of students who have graduated for the service quality of university training in Thailand. Ashim Kayastha (2011) has inherited the view of Ana Brochado, Firdaus and developed scale HEDPERF with 7 components as follows: the attitude of staff, teaching staff, the school's reputation, student accessibility, training programs, lectures and design how to evaluate students, and class sizes. Results of Kayastha Ashim showed all 7 ingredients mentioned above are affecting the service quality of university training in Thailand. The most powerful component influence on the satisfaction of the students is the teaching staff; next is the attitude of the staff, followed by the training program, the reputation of the school, teaching design and evaluating students, the accessibility of services to students and finally class sizes. His research can be summarized according to the following pattern:

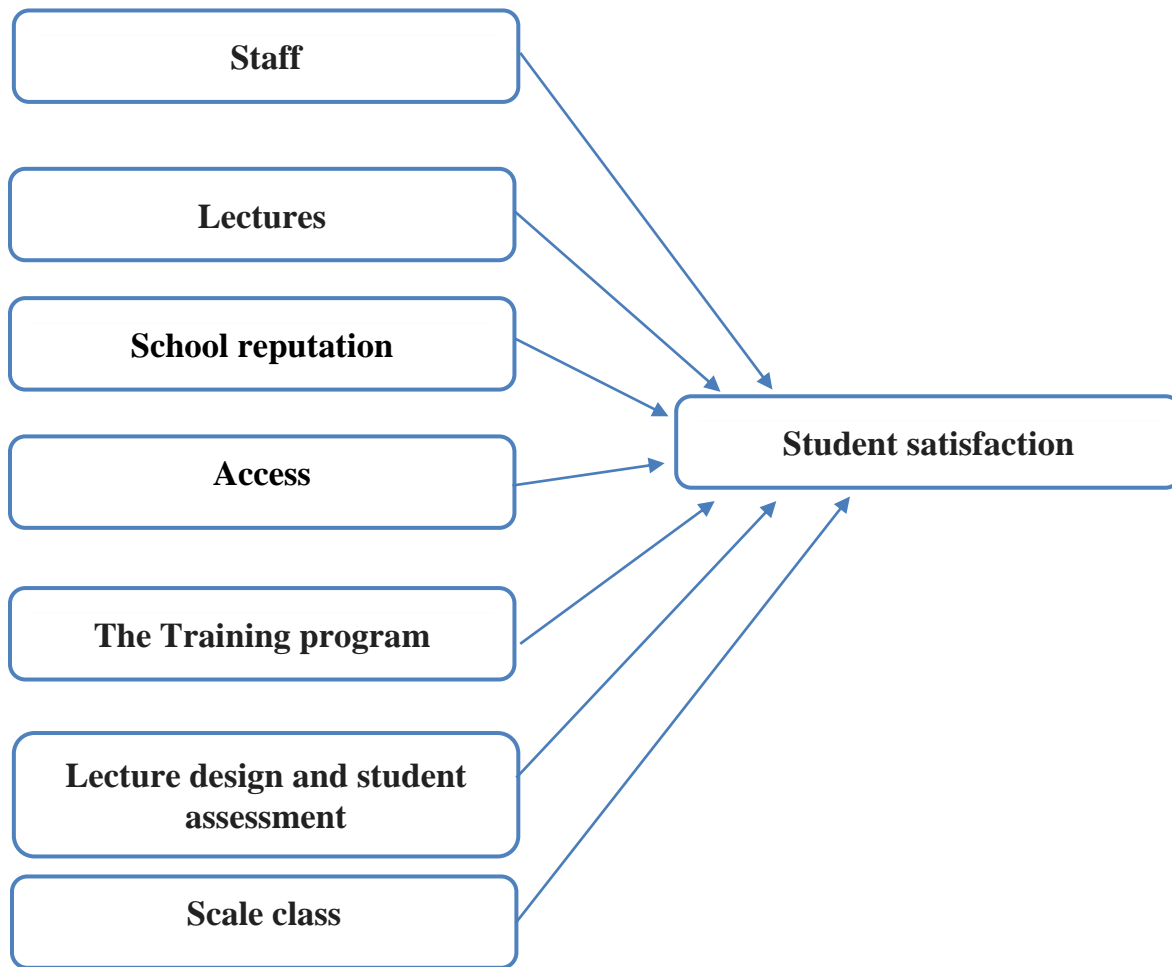


Figure 2: Research model of the impact of service quality in higher education in Thailand on student satisfaction (Source: Ashim Kayastha, 2011)

Tran Xuan Kien (2010) reviews the student's satisfaction about the quality of training at the University of Economics and business administration department - Thai Nguyen University. This research primarily analyzed 5 components of the SERVQUAL including reliability, capacity, safety, sympathy-sympathy, and tangible media. We can summarize the research model of Tran Xuan Kien as follows:

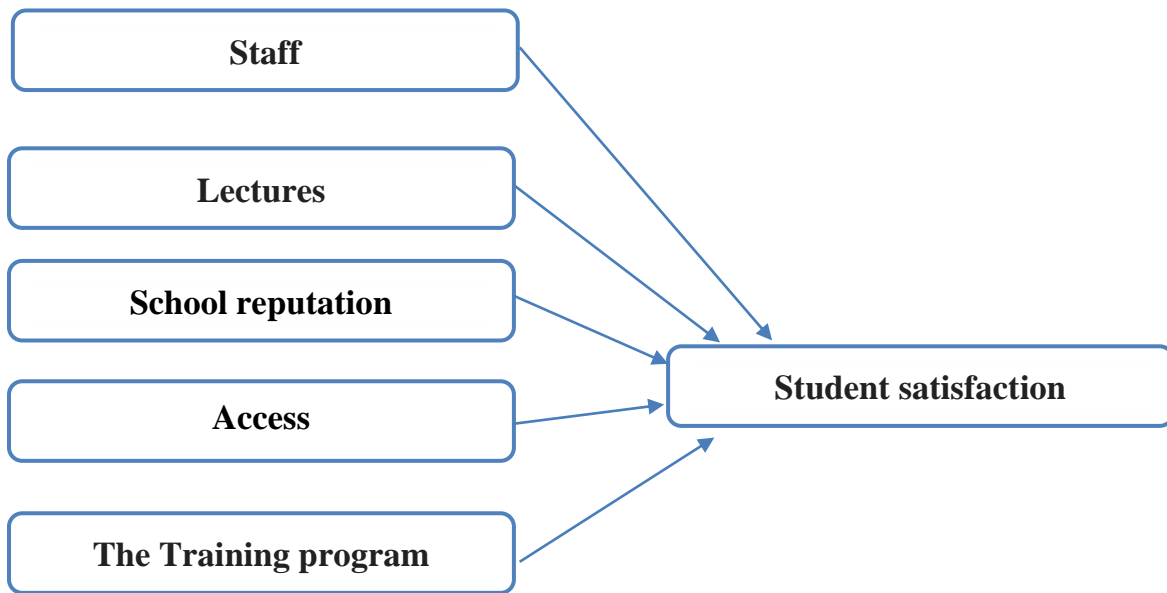


Figure 3: Research model on the impact of student satisfaction on the quality of higher education (Source: Tran Xuan Kien, 2010)

The research results showed that five factors indicated in the model affect student satisfaction of quality training services of the university.

3. Research Methodology:

3.1. Research model and hypothesis

From theoretical background and reference to research on student satisfaction with the quality of higher education services of authors both in and outside the country: Ahmad Jusoh (2005), Ashim Kayasha (2011), and Tran Xuan Kien (2010). The author of the research and the model of the project consists of seven factors as follows:

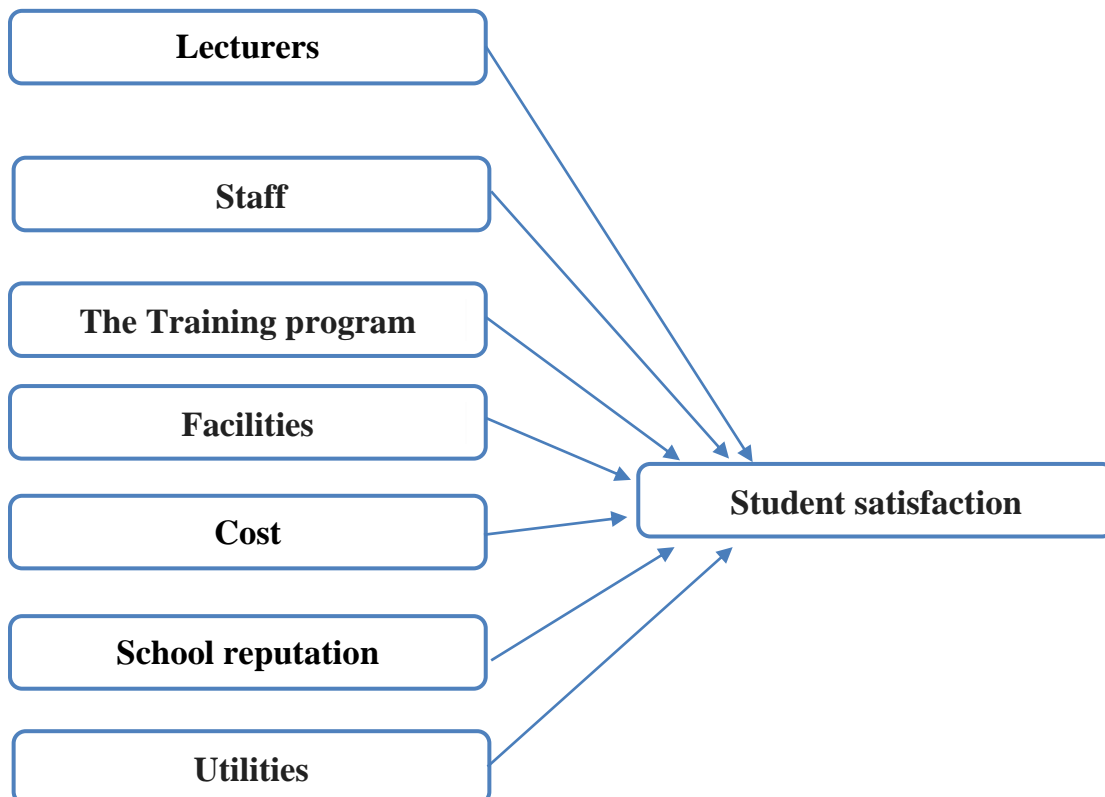


Figure 4: Research model of the author

Based on the previous studies and the proposed research model, the research hypotheses are as follows:

- + H1: Lecturers have a positive impact on student satisfaction
- + H2: Staff has a positive impact on student satisfaction
- + H3: The training program has a positive impact on student satisfaction
- + H4: Facilities have a positive impact on student satisfaction
- + H5: Reduced costs (Costs Payable) or reasonable costs have a positive impact on student satisfaction
- + H6: Utilities have a positive impact on student satisfaction
- + H7: School reputation has a positive impact on student satisfaction

3.2. Developing scales

The scales used in this study were the Likert scale of 05 levels for all observed variables. Each observation variable is a statement with a scale of 1 that is "totally disagree" with the statement to option 05 as "absolutely agree" with the statement.

This scale is based on theory and is inherited from previous studies. After passing the group discussion, the observational variables will be adjusted and added to the research. These scales include the following observational variables:

Table 1: Observation variables of the scales

| Observations variables of the lecturers scale | Code | Source |
|--|-------------|--|
| Lecturers have good methods to organize class time | GV.1 | Tran Xuan Kien (2010), Ashim Kayastha (2011) |
| Lecturers have good skills in teaching, graduation instruction | GV.2 | |
| Lecturers have high qualifications, good communication skills | GV.3 | |
| Lecturers are dedicated, enthusiastic, ready to answer questions for students | GV.4 | |
| Lecturers always make commitments and promises to students | GV.5 | |
| Observations variables of the Training program scale | Code | Source |
| The school has many programs (formal, work-study, transfer, high quality, international cooperation, etc.) for students to | CT.6 | Tran Xuan Kien (2010), Ashim Kayastha (2011) |
| Program content is practical and reasonable | CT.7 | |
| The subjects complement each other's knowledge | CT.8 | |
| Final exams are held reasonably and in time | CT.9 | |
| The content of the program is constantly updated | CT.10 | |
| Observations variables of the staff scale | Code | Source |
| Staff are always open, polite with students in communication | NV.11 | Tran Xuan Kien (2010), Ashim Kayastha (2011) |
| Staff are always willing to help, answer the questions of students | NV.12 | |
| Staff are always on hand to meet the needs of the students quickly | NV.13 | |
| Staff always give students confidence | NV.14 | |

| Observations variables of the Facilities scale | Code | Source |
|---|-------|--|
| The spacious and airy lecture halls and school grounds give a good impression to students | CS.15 | Parasuraman (1994), Harvey (1995), Ahmad Jusoh, 2005 |
| The school has modern teaching facilities and good facilities | CS.16 | |
| Classrooms are airy, hygienic | CS.17 | |
| Workshop and laboratory meet the learning needs | CS.18 | |
| The modern library is equipped with many books | CS.19 | |
| Observations variables of the Cost scale | Code | Source |
| The tuition fees are in line with the student's ability to pay | CP.20 | Hill (1995), Parasuraman (1994), Qi Huang (2010), |
| The cost of school-related services is in accordance with the student's ability to pay | CP.21 | |
| The other cost is in accordance with the student's ability to pay | CP.22 | |
| The school offers tuition support policies to students | CP.23 | |
| Observations variables of the Utilities scale | Code | Source |
| The school is conveniently located | TI.24 | Petruzzellis và ctg (2006), Price và ctg (2003) |
| Easy to rent the rooms | TI.25 | |
| Convenient living service | TI.26 | |
| Convenient public entertainment | TI.27 | |
| Observations variables of the School reputation scale | Code | Source |
| The school has an attractive level of business | DT.28 | Tran Xuan Kien (2010), Ashim Kayastha (2011) |
| The reputation of the university has a positive impact on the value of the diploma | DT.29 | |
| The school has a good reputation for training quality | DT.30 | |
| University is professional and prestigious | DT.31 | |
| The university has halls of residence, classrooms, etc. and good learning facilities | DT.32 | |
| Observations variables of the Student satisfaction scale | Code | Source |
| You are completely satisfied when attending school | HL.33 | Nguyen Dinh Tho & Cgt (2003), Tran Xuan Kien (2010), Ashim Kayastha (2011) |
| The quality of training services meets the expectations | HL.34 | |
| You will introduce to everyone attending the school | HL.35 | |

(Source: Author synthetic)

3.3. Sampling method

To achieve the goal of the study proposed at the beginning of the subject, non-probability sample selection methods to select sample forms and norms have been used and are considered reasonable to proceed to research the subject. The reason to choose this selected method is that it gladly answer the questionnaires of research as well as less expensive in terms of time and cost information needed income.

According to Hair et al (2010), the minimum sample size is 50, better is 100 and the rate observed/variable measure is 5:1. The theoretical model of this research has 35 observed variables and the 5:1 rate, the minimum sample size is 175 acres.

The author conducted a survey with 400 students at the private universities in Vietnam including Van Lang University, Van Hien University, Hong Bang International University, Saigon Technology University, and Nguyen Tat Thanh College. The survey was conducted through interviews directly and indirectly with the questionnaire created by Google tool form. This makes the medium variant quite reliable economically and timely. The total number of questionnaires is 385. After the survey, 34 questionnaires have missing information, so the number of valid service questionnaire analysis process is 351. However, the sample size 351 guarantees minimum conditions for analysis.

3.4. Data Analysis Techniques:

The collected data will be processed using the software SPSS 23.0. Some of the methods of analysis used in the study are the following: descriptive statistics, check the reliability of Cronbach's Alpha factor analysis, exploring the EFA (Exploratory Factor Analysis), regression analysis.

4. The results and discussion

4.1. Sample description statistics

The statistical results described in Table 2 show that the number of third year students interviewed was the highest at 41%. The number of alumni of the schools interviewed was the lowest with 5%. In addition, according to sex, the number of male students interviewed accounted for a higher proportion than the number of female students. However, this proportion remains relatively balanced between the sexes.

Table 2: Statistical results of sample description

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------------------|------------------|----------------|----------------------|---------------------------|
| Year | | | | |
| Second-year | 121 | 34% | 34% | 34% |
| third-year | 145 | 41% | 41% | 76% |
| Fourth-year | 68 | 19% | 19% | 95% |
| Alumni | 17 | 5% | 5% | 100% |
| Total cộng | 351 | 100% | 100% | |
| Sex | | | | |
| Male | 197 | 56% | 56% | |
| Female | 154 | 44% | 44% | |
| Total | 351 | 100% | 100 | |

(Source: Calculated results from SPSS software 23.0)

4.2. The reliability of the scale

The results of the scale reliability analysis show that all scales have Cronbach's Alpha values greater than 0,6 and the item - total correlation coefficients of the observed variables are greater than 0,3. As such, the scales are highly reliable to carry out analysis.

Table 3: Results of the reliability analysis of the scales

| ID | Scales | Cronbach's Alpha | Variable is eliminated | Analysis results |
|----|----------------------|------------------|------------------------|------------------|
| 1 | Lecturers | 0,904 | No | High reliability |
| 2 | The Training program | 0,921 | No | High reliability |
| 3 | Staff | 0,932 | No | High reliability |
| 4 | Facilities | 0,926 | No | High reliability |
| 5 | Cost | 0,937 | No | High reliability |
| 6 | Utilities | 0,952 | No | High reliability |
| 7 | School reputation | 0,888 | No | High reliability |
| 8 | Student satisfaction | 0,884 | No | High reliability |

(Source: Calculated results from SPSS software 23.0)

4.3. Exploratory Factor Analysis (EFA)

Results of the exploratory factor analysis revealed that there were six factors with Eigen values greater than 1. The observed variables had a factor load factor greater than 0,55 and 6 representative factors affecting student satisfaction are rearranged is different from the original theoretical model (07 factors).

Factor 1 includes the variables: CS.15, CS.16, CS.17, CS.18, CS.19, CP.20,CP.21, CP.23. The variables CP.20,CP.21, CP.23 originally cost factor but through EFA are lined up with Facility factor. Name this factor as CSCP.

Factor 2 includes the variables: CT.6, CT.7, CT.8, CT.9, CT.10, Name this factor as CT.

Factor 3 includes variables: DT.28, DT.29, DT.30,DT.31. Name this factor DT.

Factor 4 includes variables: NV.11, NV.12, NV.13, NV.14. Name this factor as NV.

Factor 5 includes variables: GV.1, GV.2, GV.3, GV.4, GV.5. Name this factor as GV.

Factor 6 includes variables: TI.24, TI.25, TI.26, TI.27. Name this factor as TI.

As a result, through the EFA model quality tests and the EFA test, six sets of indicators represent factors affecting student satisfaction in the quality of training services. Private universities and one scale represent common satisfaction. Synthesize the results as follows:

Table 4: Results of the EFA analysis

| ID | Scale | Observed variables | Note |
|----|-----------|---|----------------------|
| 1 | CSCP (F1) | CS.15, CS.16, CS.17, CS.18, CS.19, CP.20,CP.21, CP.23 | Facilities and Cost |
| 2 | CT (F2) | CT.6, CT.7, CT.8, CT.9, CT.10 | The Training program |
| 3 | DT (F3) | DT.28, DT.29, DT.30,DT.31 | School reputation |
| 4 | NV (F4) | NV.11, NV.12, NV.13, NV.14 | Staff |
| 5 | GV (F5) | GV.1, GV.2, GV.3, GV.4, GV.5 | Lecturers |
| 6 | TI (F6) | TI.24, TI.25, TI.26, TI.27 | Utilities |
| 7 | HL | HL.33, HL.34, HL.35 | Student satisfaction |

(Source: Calculated results from SPSS software 23.0)

4.4. Regression analysis

Regression results of factors affecting student satisfaction on the quality of training services of private universities are as follows:

Table 5. Estimated results of the model

| Model | Unstandardized Coefficients | Std. Error | Standardized Coefficients | z | Sig. | VIF |
|----------------|------------------------------------|-------------------|----------------------------------|----------|-------------|------------|
| C | -3,919E-017 | 0,042 | | 0,000 | 1,000 | |
| F1 | 0,233 | 0,042 | 0,233 | 5,569 | 0,000 | 1,00 |
| F2 | 0,388 | 0,042 | 0,388 | 9,286 | 0,000 | 1,00 |
| F3 | 0,224 | 0,042 | 0,224 | 5,348 | 0,000 | 1,00 |
| F4 | 0,541 | 0,042 | 0,541 | 12,943 | 0,000 | 1,00 |
| F5 | 0,271 | 0,042 | 0,271 | 6,494 | 0,000 | 1,00 |
| F6 | 0,243 | 0,042 | 0,243 | 5,803 | 0,000 | 1,00 |
| R ² | 0,680 | | | | | |
| Durbin-Watson | 1,972 | | | | | |
| F | 64,872 | | | | | |
| Sig. F | 0,000 | | | | | |

(Source: Calculated results from SPSS software 23.0)

The regression results in Table 5 show that the model has significant (at least one regression coefficient other than 0) due to Sig. F is less than 0,05. In addition, the VIF of each variable in both models is less than 5, so there is no hyperbolic multiplication in the model. The coefficient R² of the model is 0,68, which means that the independent variables in the model account for 68% of the variance of the dependent variable. Durbin-Watson statistics (d = 1,972) show no correlation between residuals. This means that the regression model does not violate the independent hypothesis of the error.

From Table 5, the results of the statistical significance test of each variable and test hypothesis are as follows:

Table 6. Summary of Hypothesis Testing Results

| Hypothesis | Observed variables | Beta | Sig | The results |
|-------------------|----------------------------|-------------|------------|--------------------|
| H1 | Lecturers (GV) | 0,271 | 0,000 | Chấp nhận |
| H2 | Staff (NV) | 0,541 | 0,000 | Chấp nhận |
| H3 | The Training program (CT) | 0,388 | 0,000 | Chấp nhận |
| H4 và H5 | Facilities and Cost (CSCP) | 0,233 | 0,000 | Chấp nhận |
| H6 | Utilities (TI) | 0,243 | 0,000 | Chấp nhận |
| H7 | School reputation (DT) | 0,224 | 0,000 | Chấp nhận |

(Source: Author of calculations)

4.5. Discussion

The results show that lecturers, staff, training program, facilities, cost, school reputation and utilities affect student satisfaction on the quality of training services. On the basis of this finding, the author proposes policy implications for private universities.

Factor of staff have standardized regression coefficients is 0,541. This shows that student satisfaction in the quality of training services at the private university in Vietnam depends very much on the office staff. Together with the companion of the teachers in the learning process, the employees also have certain influences, attitudes, the ways of serving staff often have more relevant to students (staff training room, accounting and service sciences) also impact on the satisfaction of the students.

Next is the factor of the training program with standardized regression coefficients is 0,388. As such, the training program also has the significant impact to the satisfaction of the student, the student is also fairly high (practicality, suitability, updated content). This is an encouraging result because in recent years the private universities are always updated, adjust training programs, detailed outline towards the essential decrease and modern approach to the trend of the world.

Lectures standardized regression coefficients 0,271 shows that factors also have a significant impact to the satisfaction of the students. This shows that the lectures is the important factor in the learning process. This factor is expected to have a strong impact on student satisfaction.

Utilities standardized regression coefficients 0,243 show next to the top concerns of students on staff, curriculum, faculty, the school with other facilities included in the learning process will help students increased satisfaction in the quality of training services.

Facilities and Cost have standardized regression coefficients 0,233 shows the school's facility is also the student's concern when it comes to the quality of training. However, this is not really a deciding factor of the quality of training. On the other hand, for students of private universities, the training costs with quality training to meet the requirements is the totally unacceptable.

School reputation standardized regression coefficients 0,224 affects student satisfaction in the quality of training. However this is not the decisive factor to the satisfaction of the students.

5. Policy implications

On the basis of empirical research results presented in section 4, the author proposes a number of policy implications for the executives at the private universities in Vietnam are as follows:

The staff is the top influence factors to the student satisfaction about the quality of training in private universities in this study. So the ability to improve the quality of service of the staff is extremely necessary to the school improve student satisfaction. Improving the effectiveness of the students served school staff with regular training, increase professionalism higher for our staff. The school staff needs to be intimate and friendlier with the students. Might formed the school counseling department, student support center, and possibly career advice and employment for students during and after school.

The program is the second largest impact factor to the satisfaction of the students in the survey. So to improve the satisfaction of students, the school need more attention in raising the quality of the training program. To improve quality, the training must match the requirements for a student to meet labour market and social requirements. In addition, the school needs to build relationships with outside companies, to create conditions for students, interns, actual environmental exposure. Besides, this also helps the school to grasp the needs of employers to design the program in accordance with requirements of the company. Having the new training program regularly renewed in accordance with the needs of human society and meet the needs of students. Improving the quality of the teaching staff by creating favorable conditions so that faculty members have the opportunity to study, research and foreign expertise. Encouraging and supporting the faculty to attend specialized scientific conferences as presenters or attendees, exchanging new knowledge. Besides, other support services in the school cater to the students as accommodation, sports area, canteen, parking areas, health, etc. should be improved to ensure service for the best students. Strengthening investment and upgrading library, offering more documents student learning and research. In addition, private universities should also increase reputation through promotion activities and volunteer social activities as well as upgrade and update the information and the ability of school website.

6. References

- Hoàng Trọng và Hoàng Thị Phương Thảo (2007), “Giá trị và chất lượng giáo dục đại học nhìn từ góc độ sinh viên”, *Tạp chí Kinh tế phát triển* 2007, trang 38 – 43
- Nguyễn Thành Long (2006), “*Sử dụng thang đo SERVPERF để đo lường chất lượng giáo dục đại học tại trường Đại học An Giang*”, Đề tài nghiên cứu khoa học, Đại học An Giang.
- Nguyễn Thị Trang (2010), *Xây dựng mô hình đánh giá mức độ hài lòng của sinh viên với chất lượng đào tạo tại trường ĐH Kinh tế, ĐH Đà Nẵng*, Đề tài nghiên cứu khoa học của sinh viên, Trường ĐH kinh tế, ĐH Đà Nẵng.
- Nguyễn Trần Thanh Bình (2009), *Mối quan hệ giữa chất lượng dịch vụ đào tạo được cảm nhận và sự hài lòng của sinh viên trường Đại học Công nghệ Sài Gòn*, Luận văn thạc sỹ, chuyên ngành Quản Trị Kinh Doanh, Bảo vệ tháng 09/2009, tại Trường Đại học Kinh tế TP. Hồ Chí Minh
- Nguyễn Việt và Nguyễn Khánh Duy (2005), “Các nhân tố ảnh hưởng quan trọng đến sự hài lòng của sinh viên về chất lượng đào tạo ở trường Đại học Kinh tế TP. Hồ Chí Minh”, *Tạp chí Kinh tế Phát triển*, tháng 02 – 2005.
- Trần Xuân Kiên (2010), *Đánh giá sự hài lòng của sinh viên về chất lượng đào tạo tại trường ĐH Kinh tế và Quản trị Kinh doanh*, Đề tài nghiên cứu khoa học, Đại học Thái Nguyên.
- Ahmad Jusoh (2005), *Service quality in higher education: Management students' perspective*.
- Ashim Kayastha (2011), *A study of graduate student satisfaction towards service quality of universities in Thailand*.
- Parasuraman, Valarie A. Zeithaml, Leonard L. Berry (1988), “SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality”, *Journal of Retailing*, Volume 64, Number 1, Spring 1988
- Snipes, R.L. & N. Thomson (1999). An Empirical study of the factors underlying student service quality perceptions in higher education. *Academy of Educational Leadership Journal*, Volume 3, Number 1, 1999. 39-57.
- Parasuraman, A., Zeithaml, V. A., Berry, L. L., “A conceptual model of service quality and its implications for future research”, *Journal of Marketing*, 49 (3) (1985), 41-50,
- Qi Huang (2010), “*The relationship between service quality and student satisfaction in higher education sector: a case study on the undergraduate sector of Xiamen university of China*”.
- Harvey, L. (1995), “Student satisfaction”, *The New Review of Academic Librarianship*, Vol. 1, pp. 161-73.
- Harvey, L. (2003), “Student feedback”, *Quality in Higher Education*, Vol. 9 No. 1, pp. 3-20,
- Hill, F.M. (1995), “Managing service quality in higher education”, *paper presented at the Quality Assurance in Education Conference*, Manchester.
- Leckey & Neill (2001), “Quantifying Quality: the importance of student feedback”, *Quality in Higher Education* 7(1), pg.19 -32
- Hoàng Trọng & Chu Nguyễn Mộng Ngọc (2005), *Phân tích dữ liệu nghiên cứu với SPSS*, NXB Thống Kê.
- Hair, J.F., Black, W.C., Babin, B.J., & Anderson, R.E. (2010). *Multivariate Data Analysis*. Seventh Edition. Prentice Hall, Upper Saddle River, New Jersey.