

Strategies to Improve the Quality of Academic Service at Bali State Polytechnic Based on Student Satisfaction Inventory

I Wayan Siwantara
Business Administration Dept.
Politeknik Negeri Bali
 Denpasar, Indonesia
 wayansiwantara@pnb.ac.id

Ni Wayan Sumetri
Business Administration Dept.
Politeknik Negeri Bali
 Denpasar, Indonesia
 wayansumetri@pnb.ac.id

Abstract—The objectives of this study were to determine the level of the quality of academic service in Bali State Polytechnic based on Student Satisfaction Inventory (SSI), and to formulate a strategy in order to improve the quality of academic services in Bali State Polytechnic (BSP) based on SSI. The sample in this study comprised of 370 students recruited using the stratified proportional random sampling technique. The data were collected by distributing questionnaires, and conducting interviews and observations. To find out the level of the quality of BSP academic services the descriptive statistical analysis was deployed, and to formulate strategies in order to improve the quality of BSP academic services the Important-Performance Matrix analysis technique was used. The results of the descriptive statistical analysis revealed that the level of the quality of academic service at BSP is in the good category. The strategies that can be used to improve the quality of academic services at BSP include the following: increase facilities and equipment for academic process, increase industry involvement in curriculum development, make continuous adjustments to instructional materials, and provide training on excellent service to administrative staff.

Keywords—quality, academic service, student satisfaction inventory

I. INTRODUCTION

The quality of service is defined as excellent, superior service received by customers relative to what they expect [1]. Two main factors affect the quality of service, namely: (1) customer perception of the actual service they receive (perceived service). (2) Services that are actually expected / desired (expected service) [2]. That there are five dimensions of the quality of service commonly referred to as Servqual, namely: (1) Tangibles, i.e. the appearance of physical facilities, equipment, employees, and communication materials; (2) Reliability, i.e. the ability to carry out the promised service in a convincing and accurate manner; (3) Responsiveness, i.e. the willingness to help customers and provide services quickly; (4) Assurance, i.e. the knowledge and courtesy of employees and their ability to convey trust and confidence; and (5) Empathy, i.e. the willingness to give a deep and special attention to each customer [3].

The quality of education services is a complex aspect and must be seen from various aspects, because it can be defined and clarified in various ways [4]. The higher education sector must strive to provide high quality services and satisfaction to students, to ensure the sustainability of the educational

institutions in a competitive environment [5]. A study of the rapidly developing technical education sector in India found that competition for students now has forced institutions to adopt a “student-as-a-customer” approach in running education [6].

Student Satisfaction Inventory (SSI) is an indicator of student satisfaction measurement in higher education services developed by Noel-Levitz since 2003 that is now widely used at universities worldwide [7]. SSI contains ten dimensions, viz. academic advising and counseling effectiveness, academic support services, campus support services, financial fees and financial aids effectiveness, recruitment and registration effectiveness, instructional effectiveness, campus climate, concern for the individual, safety and security, and service excellence [8].

The quality of education services at Bali State Polytechnic (BSP) can be classified into two areas of service quality, namely the quality of academic service and the quality of non-academic service. The quality of academic services consists of the effectiveness of academic advising and counseling, the effectiveness of academic support services, the effectiveness of the learning process, attention to individual students, and excellent service. Meanwhile, the quality of non-academic services consists of: campus support services, effectiveness of tuition fees and scholarships, effectiveness of student recruitment and registration, campus climate, safety and security [9].

The objectives of the present study are: (1) To find out the quality of academic services at Bali State Polytechnic (BSP) based on the Student Satisfaction Inventory and (2) To formulate strategies in order to improve the quality of educational services at Bali State Polytechnic based on the Student Satisfaction Inventory.

II. METHOD

This research was conducted at Bali State Polytechnic. The population in this study were all students of Bali State Polytechnic totaling 4,468 at the end of 2018. The sampling technique used was stratified proportional random sampling based on the proportion of the total population in each sub-population [10]. Determination of the sample size in this study was 370 student based on the Slovin formula [11].

The instrument for this study is a closed questionnaire consisting of a set of statements based on indicators from

SSI. Each questionnaire item was measured using a Likert scale, that is a scale used to measure attitudes, opinions and perceptions of a person or group of people about social events or symptoms [12].

Data collection was done through conducting observation, questionnaires, and interviews (Sugiyono, 2012). The instrument in this study was a closed questionnaire consisting of a set of statements based on indicators from the Student Satisfaction Inventory. Each statement item was measured using a Likert scale, a scale used to measure the attitudes, opinions and perceptions of a person or group of people about social events or symptoms [12]. Each question item was given a score of 1 for the category that is not important (not good), then 2 for the less important category (not good), 3 for the important category (good), and 4 for the very important category (very good).

Data analysis techniques used in this study were: (1) descriptive statistical analysis used to compute the average value of importance and quality level of each indicator and dimension as well as the performance gap of each indicator and dimension. (2) Important-Performance Matrix analysis used to analyze strategies to improve the quality of academic services [13], as shown in Fig. 1.

Strategy formulation based on the position of each indicator located in the four quadrants was as follows:

1) *Quadrant I (Concentrate These)*: This quadrant includes factors that are considered important by the customers, but in fact these factors do not meet the customers' expectations (performance of service quality is still low), so these factors must be improved by improving the performance of their services through continuous improvements so that the performance indicator in this quadrant increases.

2) *Quadrant II (Keep Up The Good Work)*: This quadrant is an area that contains factors that are considered important by customers and is in line with their expectations (relatively high quality service performance), so that the quality of service for these factors must be maintained because they make the product / service superior in the eyes of the customers.

3) *Quadrant III (Possible Overkill)*: This quadrant is an area that contains factors that are considered less important by customers but the quality performance is of high level. Factors included in this quadrant are considered to have service quality that is excessive for low importance so that it can be reduced in order to save costs.

4) *Quadrant IV (Low Priority)*: This quadrant is an area that contains factors that are considered less important by customers and their performance is not very good. Improving the quality performance of the factors included in this quadrant needs to be reconsidered because the benefits for the customers are very small.

III. RESULT AND DISCUSSION

Academic service in BSP measuring by five dimension i.e: Effectiveness of academic advising and counseling, academic support services, effectiveness of the learning process, attention to individual students, and excellent service [8].

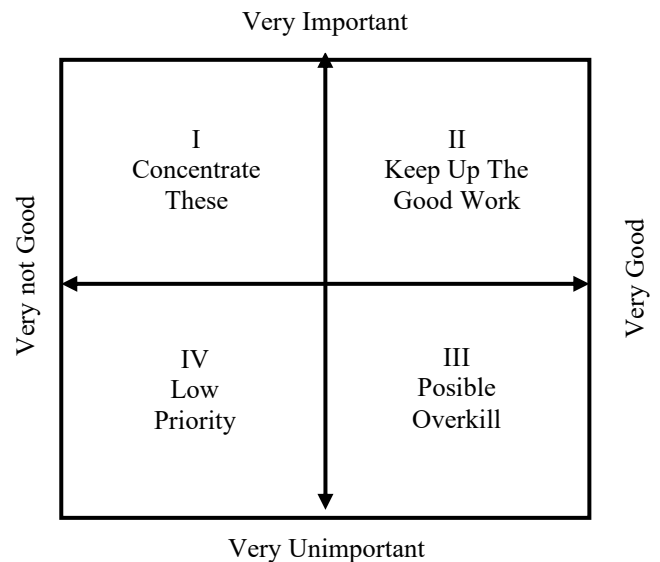


Fig. 1. Important-Performance matrix [13].

The effectiveness of academic advising and counseling was measured using four variables, namely: (1) ease of Academic Advisor (AA) or counselor to be met; (2) AA's or counselor's ability in providing guidance; (3) personal attention from the AA to their advisees on academic problems faced; and (4) AA's attitude in giving advice to students (friendliness, politeness, etc.).

Academic support services were measured through thirteen variables, namely: (1) completeness of books in the library; (2) the implementation of computerization in the library; (3) the attitude of librarians in serving students; the ability of librarians to serve students; (4) completeness of laboratory/ workshop equipment; (5) updating of laboratory/ workshop equipment; (6) condition of laboratory/ workshop equipment; (7) availability of laboratory/ workshop equipment; (8) cleanliness, tidiness, and comfort of classrooms; (9) cleanliness, tidiness and comfort of the campus environment; (10) condition of classroom learning aids (LCD projector, whiteboard, etc.); (11) condition of class equipment (tables, chairs, etc.); and (13) ease of internet access for various purposes.

Effectiveness of the learning process was measured through sixteen variables, namely: (1) curriculum is well structured; (2) curriculum meets industry needs; (3) course load (number of meetings, assignments, practicums, etc.) is in accordance with the SKS of the course; (4) student knowledge about the benefits and objectives of the course; (5) ability of lecturers in teaching in class or in the laboratory; (6) suitability of course material with the development of science and technology; (7) course material delivered is easy to understand; (8) course assignments are useful to improve understanding of course material; (9) practicum is very helpful for students to understand course material; (10) fair and transparent assessment system; (11) ease in obtaining academic transcripts; (12) ease in obtaining cover letters for academic matters (for assignments, on-the-job training, research, etc.); (13) teaching process increases the mastery of student knowledge; (14) teaching process improves student skills; (15) teaching process provides added value to the student's personality (discipline, ability to

communicate, discuss, etc.); and (16) teaching process improves student academic skills.

Attention to individual students was measured through seven variables, namely: (1) personal attention from lecturers and administrative staff towards students; (2) personal attention from the institution through evaluation of study results; (3) appreciation and respect for the personal rights of students in campus life; (4) willingness of the institution to hear and respond to student suggestions and complaints; (5) availability of communication forums between students and institution); (6) fair treatment of each individual student; and (7) institutional awards for outstanding students.

Service excellence was measured through eight variables, namely: (1) lecturers are neat and clean; (2) administrative staff are neat and clean; (3) lecturers are friendly and polite towards students; (4) administrative staff are friendly and polite towards students; (5) lecturers provide good service to cater the needs of students; (6) administrative staff provide good service to cater the needs of students; (7) it is easy to recognize lecturers from their appearance; (8) it is easy to recognize administrative staff from their uniform or identification.

Prior to its distribution to all respondents, the validity of the questionnaire was tested using product moment correlation; if the *r* value is ≥ 0.3 , then the statement (instrument) can be considered valid, otherwise it was considered invalid [12]. The correlation coefficients obtained from the instrument validity test were between 0.494 to 0.961, hence it can be concluded that the instrument was valid. To test the reliability of the instrument, the Cronbach Alpha (α) coefficient test was used, and the research instrument can be said to be reliable if the Cronbach α value is > 0.6 [12]. The Cronbach Alpha (α) coefficient of instrument reliability was 0.768 to 0.821, indicating that the instrument is reliable.

The criteria for evaluating the quality of academic services at BSP are based on the average score for each dimension of the quality of academic services at BSP with the following rating scales: 1.00 - 1.75 = not good (NB); 1.76 - 2.50 = less good (LG); 2.51 - 3.25 = Good (G); 3.26 - 4.00 = Very good (VG) [10]. Table I presents the results of the descriptive statistical analysis of the level of the quality of academic services at BSP using the Student Satisfaction Inventory.

TABLE I. THE LEVEL OF THE QUALITY OF ACADEMIC SERVICES AT BSP BASED ON SSI

No.	Dimension	Average Score	Remark
1	Effectiveness of academic advising and counseling	2.85	G
2	Academic support services	2.68	G
3	Effectiveness of the learning process	2.76	G
4	Attention to individual students	2.84	G
5	Excellent service	2.97	G
Average score		2.82	G

The results of the Important-Satisfaction Matrix analysis showed the indicators for each dimension of the quality of

the academic service at BSP considered important by the students but that they had not met the students' expectations (quadrant I), as shown at Table II.

TABLE II. INDICATORS OF THE DIMENSION IN QUADRANT I

No.	Dimension	Indicators
1	Effectiveness of Academic Advising and Counseling	Personal attention from AA as to their advisees' academic problems
2	Academic Support Services	Availability of laboratory/ workshop equipment, Updated laboratory / workshop equipment, Availability of learning aids in class (LCD projector, blackboard, etc.), Condition of class equipment (table, chairs, etc.), Ease of internet access for academic purposes.
3	Effectiveness of the Learning Process	Curriculum compatibility with industry needs, Student knowledge about course benefits and objectives, Suitability of course materials with the development of science and technology, Understanding of course materials, Transparency in the assessment system.
4	Attention to Individual Students	Willingness of the institution to hear and respond to students' suggestions and complaints, Availability of a communication forum between students and the institution.
5	Excellent Service	Friendliness and politeness of the administrative staff, Administrative staff services to the needs of students.

Based on the information presented in Table II above, the strategies that can be formulated to improve the quality of academic services at BSP are below:

- Increase personal attention from AAs to each advisee by conducting advising session at least once a month.
- Increase the availability of laboratory/workshop equipment to cater to all students.
- Update laboratory / workshop equipment in accordance with technological advancement.
- Increase the availability of learning aids (LCD Projector) in each class.
- Do regular maintenance of class equipment and immediately repair or replace damaged class equipment (tables, chairs).
- Increase internet bandwidth to meet the needs of internet use in the academic process.
- Increase the involvement of industries in curriculum design so that the curriculum really can meet industry needs.
- Enhance student understanding of course objectives and benefits by describing the objectives and benefits at the beginning of the semester.
- Make adjustments to course materials on an ongoing basis to suit the development of science and technology.
- Enhance student understanding of course materials delivered in class.
- Return graded exams and assignments.
- Increase the attention of the institution towards student suggestions and complaints.

- Provide a communication forum between the institution and students.
- Give training on excellent service to administrative staff who provide academic services.

IV. CONCLUSION

The level of the quality of academic service at the Bali State Polytechnic is in the category of good with an average score of 2.82.

Strategies to improve the quality of academic services at BSP are as follows: increase personal attention from AAs to their advisees, increase the availability of laboratory equipment/workshops to cater all students, update laboratory/workshop equipments to suit technological advancement, increase availability of learning aids (LCD Projector) in each class, routinely maintain class equipments and immediately repair or replace damaged classroom equipments (tables, chairs), increase internet bandwidth to meet the needs of internet use in the academic process, increase industry involvement in curriculum design, increase student understanding of the course objectives and benefits, make adjustments to course materials on an ongoing basis to suit the development of science and technology, increase student understanding of the course materials delivered in class, return graded exams and assignments given to students, pay attention to student suggestions and complaints, provide a communication forum between the institution and students, and provide training on excellent service to administrative staff.

REFERENCES

- [1] V. A. Zeithaml and M. J. Bitner, *Service Marketing: Integrating Customer Focus Across The Firm*. 2nd Ed. Boston: McGraw-Hill. 2000.
- [2] F. Tjiptono and C. Gregorius, *Service, Quality & Satisfaction*. Yogyakarta: Andi. 2005.
- [3] A. Parasuraman, Zeithaml, and L. Berry, "Servqual: A multiple-item scale for measuring consumer perceptions of service quality," *Journal of Retailing*, vol. 64, pg. 12-40. 1988.
- [4] K. Choudhury, "Evaluating customer-perceived service quality in business management education in India," *Asia Pacific Journal of Marketing and Logistics*, vol. 27 No. 2, pp. 208-225, 2015.
- [5] DeShields, O.W. Kara, and E. Kaynak, "Determinants of business student satisfaction and retention in higher education: applying herzburg's two-factor theory," *International Journal of Educational Management*, vol. 19, no. 2, pp. 128-139, 2005.
- [6] R. Jain, S. Sahney, and G. Sinha, "Developing a scale to measure students' perception of service quality in the Indian context," *The TQM Journal*, vol. 25, no. 3, pp. 276-294, 2013.
- [7] K. Carabajal, *Noel-levitz student satisfaction inventory report*. 2012.
- [8] Noel-Levitz, *Student Satisfaction Inventory*. Summit Pacific College. 2016.
- [9] W. Siwantara and K. Suciani, *Validasi Model Mutu Pelayanan Pendidikan Politeknik Negeri Bali Berdasarkan Student Satisfaction Inventory*. 2018.
- [10] Sugiyono, *Metode Penelitian Bisnis*. Bandung: Alfabeta, 2011.
- [11] H. Umar, *Metode Riset Bisnis*. Jakarta, PT Gramedia Pustaka Utama, 2007.
- [12] Riduwan, *Skala Pengukuran Variabel-Variabel Penelitian*. Bandung: Alfabeta. 2002.
- [13] N. R. Hayati, T. I. Muchlis, and Mardi, *Kepuasan Pelanggan (Mahasiswa) Dalam Pelayanan Pendidikan Tinggi (Studi Kasus di Universitas Widyatama)*.