

Analysis of Service Quality Performance in Higher Education Uses Importance Performance Competitor Analysis (IPCA)

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Abstract

This study aims to determine the performance of service quality from students' perceptions of study programs in tertiary institutions using Gap analysis with measurement instruments using Higher Education Performance (HedPerf) modified into 5 (five) factor/dimension structures. The method used in this study is a quantitative method with a descriptive approach, sampling using the Probability Sampling technique in Proportioned Stratified Random Sampling. Data analysis uses the Importance Performance Competitor Analysis (IPCA) method which is a form of analysis that answers criticism of the IPA analysis, especially regarding competitor factors. Where data samples are taken from study programs which are the focus of research and from study programs that become competitors. The results obtained from this study indicate that 10 service items require immediate action to improve the quality of service performance. Especially from the variable reputation that has a dominant position to be immediately reformed.

Keywords: Service Quality, Higher Education, HedPerf, Importance Performance Competitor Analysis

INTRODUCTION

The increasing complexity and uncertainty that characterizes society today is a phenomenon that must be faced by service institutions at all times including in the higher education sector at the end of this decade. In the end, the higher education sector is demanded to adapt to a more competitive environment as happened in the telecommunications sector and the industrial sector [1].

Higher education achieves its mission not only through research but also through the students they educate. In this case, tertiary institutions are service units that provide education and other facilities to students. In the literature, this field of study in the university side is called "quality in higher education" or "service quality in higher education." [2] With the increasingly complex problems faced and demands to be able to adapt to a more competitive environment, higher education must always improve the quality of services for students to be able to survive in the current era of global competition.

Quality of service or Service Quality is how far the difference between reality and expectations of service users for the services they receive or receive. So two factors affect the quality of

services, namely the expected service (expected service) and the service received or felt (perceived service) [3].

Service user satisfaction is a post-purchase evaluation in which the alternative chosen at least provides the same outcome or exceeds the expectations of service users, while dissatisfaction arises if the results obtained do not meet the expectations of service users [4].

Understanding of service performance is the performance of the service received by the customer itself and assesses the quality of service based on what the customer feels after the service [5].

The relationship between service quality, customer satisfaction, and company profits is very closely related. The higher level of quality results in higher levels of customer satisfaction [6].

During this time the quality of services aimed at students is still no effort to improve its quality with student satisfaction as a reference. The only thing that applies today is based on student satisfaction with academic services that are focused on lecturers during teaching and learning activities.

Then to find out the quality of its services, a company in the era of global competition cannot

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be determined solely in terms of its performance but also needs to pay attention to the performance of its competitors. It's important to consider competitor information in addition to the Importance attribute.

Based on this, this research was conducted to explain and analyze the performance of department service quality in tertiary institutions in a review of the Importance Performance Competitor Analysis (IPCA) method. And the results are used to determine the quality of service performance in the department which will then be used as a reference in improving the quality of service in higher education.

MATERIAL AND METHOD

This study uses a service quality measurement instrument of Higher Education Performance (HedPerf) with 5 (five) dimensions of service quality consisting of 39 items/attributes that have proven to be more reliable [7]. The conceptual dimensions include:

1. Non-Academic Aspect, this aspect consists of items that are important to enable students to fulfill their learning obligations, and in particular with regard to education personnel.
2. Academic Aspect, Items that describe this aspect are entirely the responsibility of academics/lecturers.
3. Reputation, this aspect is loaded with things that show the importance of higher education institutions in projecting a professional image.
4. Access, this aspect consists of matters relating to issues such as the ability to approach, ease of contact, availability, and comfort.
5. Program Issues, This factor emphasizes the importance of offering a broad and reputable academic/specialization program with a flexible structure and syllabus. [8]

In this study, a quantitative method with a descriptive approach was used. The main data collection through a survey using a questionnaire. Survey samples use probability sampling with proportionate stratified random sampling [9]. The measurement scale uses a Likert scale with a 5 point scale and provides questions about the level of importance (expectations) and level of performance (satisfaction) to students regarding the quality of department services with ratings weighing 1 to 5.

The analysis used is the Importance Performance Competitor Analysis (IPCA) where the gap analysis method is present to answer the

criticism of the Importance Performance Analysis (IPA) analysis method, especially regarding consideration of the performance of competitors [10].

Similar to the IPA analysis that was first proposed by Martilla & James [11] IPCA analysis also uses quadrant analysis where GAP Information (GAPi) is used as a determinant of the point on the vertical axis (Y) and the difference in performance between the company and its competitors (PDi) is the representative point on the horizontal axis (X). Through the equation:

$$GAP_i = P_i - I_i \quad \text{and} \quad PD_i = P_i - P_{competitor.i}$$

While the quadrant of IPCA is shown in figure 1 as follows [12]

High	II	I
	Head to Head Competition	Solid Competitive Advantage
Low	III	IV
	Urgent Action	Null Advantage
	Low	High
	Performance Difference (PD _i)	

Figure 1. Matrix of Importance Performance Competitor Analysis

Based on **Figure 1**. Can be explained that Quadrant I (Solid Competitive Advantage) is a real picture of strength compared to competitors, Quadrant II (Head to Head Competition) is less performance than competitors but has exceeded student expectations, Quadrant III (Urgent Action) requires improvement immediately (top priority), quadrant IV (Null Advantage) performance has exceeded that of competitors but not in line with student expectations and is not a real advantage.

Data Collection

The population of this study is Bachelor (S1) students from two departments in the same field and have tight quality competition at universities in East Java. And by using the Taro Yamane formula the number of samples from department A that will be measured by the quality of service is 137 students and 176 students from department B as competitors with the following details:

Tabel 1. Number of Research Samples

Year of Entry	Dept. A			Dept. B		
	M	F	SUB TOTAL	M	F	SUB TOTAL
2013	3	0	3	1	0	1
2014	1	1	2	1	0	1
2015	4	0	4	8	2	10
2016	18	13	31	25	11	36
2017	17	13	30	24	13	37
2018	22	8	30	27	6	33
2019	19	18	37	47	11	58
Total	84	53	137	133	43	176

From table 1 it can be seen the distribution of respondents based on the year of entry in each department. If judging by the distribution of respondents based on gender characteristics can be described as in Figure 2 below:

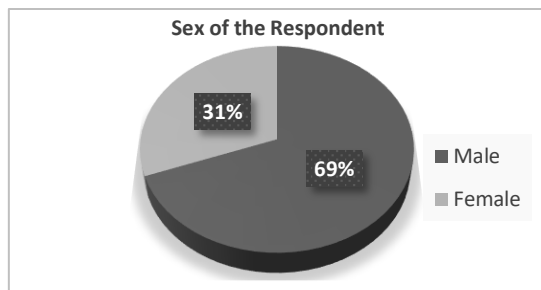


Figure 2. Respondent's Gender Distribution

From Figure 2 it can be seen that the distribution of respondents by sex shows the dominance of respondents who are male.

RESULT AND DISCUSSION

Result

When validity was tested on 39 service items with a tolerance level of 5%, it was found that the level of performance and importance had a value smaller than 0.05 so that the measurement instrument was declared valid. Then when tested for reliability the Cronbach's Alpha value for the performance level was 0.954 while for the importance of Cronbach's Alpha the value was 0.953 so the measurement instrument was declared valid and reliable. the reliability obtained by Cronbach's Alpha value for performance level is 0.954 while for the importance level of Cronbach's Alpha value is 0.953 so that the measurement instruments in this study can be declared valid and reliable.

After analyzing the data using Importance Performance Analysis (IPCA) the results are as shown in the table. 2

Table 2. IPCA Analysis Results

Item Number Service	\bar{P}	\bar{I}	\bar{P}_{cmp}	PD (x)	GAP (y)
1	3.91	4.44	3.73	0.18	-0.53
2	3.22	3.68	3.27	-0.05	-0.46
3	3.68	4.39	3.59	0.09	-0.71
4	3.78	4.41	3.61	0.17	-0.63
5	4.00	4.56	3.88	0.13	-0.56
6	3.77	4.38	3.64	0.14	-0.61
7	3.69	4.11	3.67	0.02	-0.42
8	3.95	4.39	3.94	0.01	-0.45
9	4.06	4.45	3.94	0.12	-0.39
10	3.70	4.20	3.95	-0.25	-0.50
11	3.93	4.34	3.90	0.02	-0.42
12	3.89	4.12	3.86	0.03	-0.23
13	4.06	4.03	4.38	-0.32	0.03
14	4.12	3.91	4.48	-0.35	0.22
15	4.33	4.15	3.73	0.60	0.18
16	4.29	4.13	3.64	0.65	0.16
17	3.98	4.53	3.94	0.03	-0.55
18	4.04	4.61	3.88	0.16	-0.58
19	3.52	4.32	3.40	0.11	-0.80
20	3.38	4.30	3.45	-0.07	-0.92
21	4.26	4.59	4.13	0.13	-0.33
22	3.75	4.17	3.94	-0.19	-0.42
23	4.12	4.76	4.53	-0.41	-0.64
24	3.75	4.27	4.08	-0.33	-0.52
25	3.86	4.24	3.71	0.15	-0.38
26	2.85	4.48	4.39	-1.53	-1.63
27	4.66	4.52	4.64	0.02	0.14
28	3.60	4.09	3.70	-0.10	-0.49
29	4.47	4.71	4.16	0.32	-0.23
30	4.32	4.28	4.44	-0.12	0.04
31	3.99	4.41	3.95	0.04	-0.42
32	4.06	4.43	4.01	0.05	-0.37
33	4.14	4.58	4.07	0.06	-0.44
34	3.85	4.34	3.85	0.01	-0.48
35	3.81	4.39	3.90	-0.09	-0.58
36	3.69	4.34	3.56	0.13	-0.64
37	3.91	4.30	3.90	0.01	-0.39
38	4.20	4.16	4.31	-0.11	0.04
39	3.80	3.81	3.85	-0.05	-0.01

\bar{P} : Focal Department Performance;
 \bar{I} : Focal Department Importance;
 \bar{P}_{cmp} : Competing Department Performance

Based on the data in table 2, which contains PD and GAP, it will then be plotted in the IPCA quadrant to determine the position of each service item.

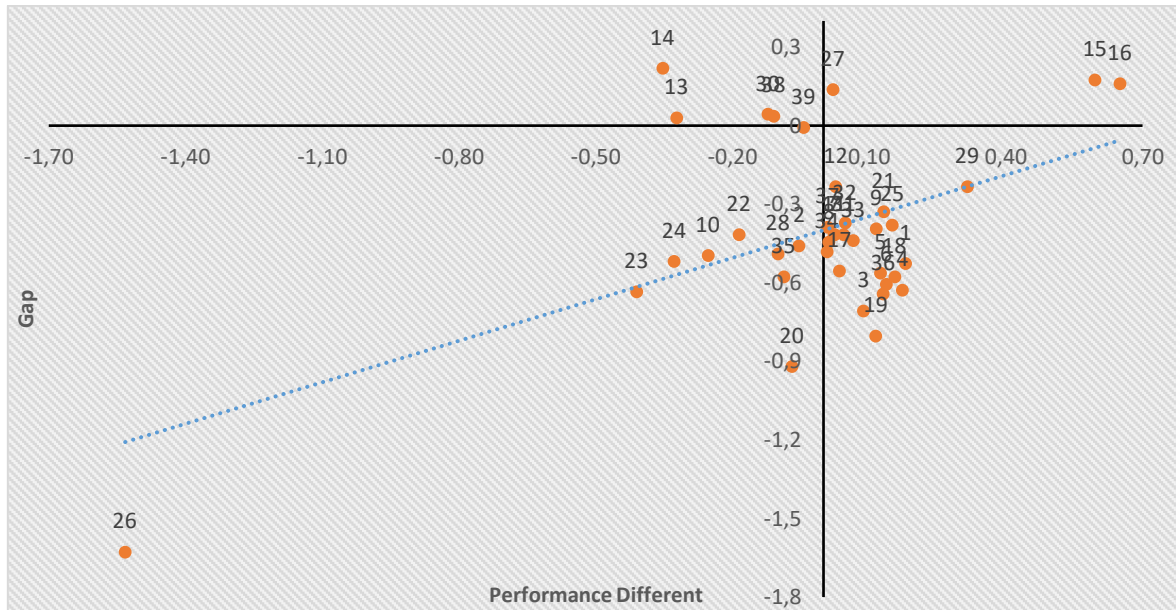


Figure 3. IPCA Matrix of Service Quality Performance in Department A

Discussion

From **Figure 3**, it can be seen that there is a gap between the level of importance (expectations) and the level of service performance in Department A. Then we can also find that there are 3 (three) service items that are in quadrant I (Solid Competitive Advantage), then there are 4 (four) service items that are in quadrant II (Head to Head Competition), then there are 10 service items that are in quadrant III (Urgent Action), and the last there are 22 service items that are in quadrant IV (Null Advantage). For more details, we can see in the table. 3. the following

Table. 3. Recap the position of service items on IPCA

QUADRAN	CATEGORY	NUMBER OF ITEM SERVICES	AMOUNT
I	Solid Competitive Advantage	15, 16, 27	3 Items
II	Head to Head Competition	13,14, 30, 38	4 Items
III	Urgent Action	2, 10, 20, 22, 23, 24, 26, 28, 35, 39	10 Items
IV	Null Advantage	1, 3, 4, 5, 6, 7, 8, 9, 11, 12, 17, 18, 19, 21, 25, 29, 31, 32, 33, 34, 36, 37	22 Items

From the **table. 3** will be elaborated based on each dimension in 4 (four) quadrants, namely:

1. Quadrant I Solid Competitive Advantage
The service items in this quadrant reflect the strength of the department compared to competitors who should have maintained this advantage, based on table.3 there are 3 service items, including:
 - Academic Aspect: i.e. item service 15, lecturer responds to requests for assistance from students, and service item 16, lecturer is willing to help student problems sincerely
 - Reputation: i.e. service item 27, Department is well accredited
2. Quadrant II Head to Head Competition
This quadrant illustrates the service performance of the department has exceeded the expectations of students but is still below the performance of competitors. If the department can improve the quality of its services to be equal or even exceed the competitor's performance, then the service items in this quadrant can be a solid strength for the department. From this quadrant there are 4 service items, including:
 - Academic Aspect: that is service item 13, lecturer lecturers provide lecture material that can make students understand and understand, then service item 14 Lecturer shows concern for students and is friendly in serving students.

- Reputation: this is a service item of 30 Department Reputations that makes it easy for graduates to get a job
- Program Issues: i.e. service items 38 Departments have varied fields of interest studies

3. Quadrant III Urgent Action

Service items that occupy this quadrant illustrate the department's weaknesses in service quality performance so that it becomes a top priority for immediate corrective action. Not only does it not meet the expectations of students but their performance is still below the performance of competitors. There are 10 service items that require immediate action to improve service quality performance. These service items include:

- Non-Academic Aspect: i.e. service items 2 Education Personnel care and attention to the personal problems of students, and service items 10 SOP services in academic administration, laboratory administration and administration of reading rooms that are easily understood.
- Academic Aspect: i.e. service item 20, the lecturer takes sufficient time to provide consultations for students in need.
- Ut Reputation: i.e. service item 22 has dormitory facilities and accessories, 23 service items Department have academic facilities (class building, reading room, laboratory, etc.), service item 24 not too many students in class, service item 26 Department has facilities recreation (shady park, student gazebo, large parking lot, etc.), and service items for 28 campus locations that are easily accessible by public transportation
- Access: the 35 Department service items make it easy for students to channel their talents and interests by organizing
- Program Issues: i.e. 39 service items The department has a flexible syllabus (not binding)

4. Quadrant IV Null Advantage

The service items in this quadrant have higher performance than competitors. However, students' expectations were not met by the performance of this attribute. Thus, the quadrant is called 'null advantage'. Although the Department seems to have an advantage over its competitors, this is not a real advantage because the most important part in service quality performance is that student

expectations cannot be met. There are 22 service items in this quadrant, including:

- Non Academic Aspect: namely service item 1 Education Staff, willing to help solve student problems, service item 3 Education Staff, have the ability to deal with and resolve complaints from students efficiently, service item 4 Education Staff, willing to respond immediately to requests for student assistance, service items 5 Education Personnel, providing services with accurate and reliable information, service items 6 Education Personnel, responsible and fulfilling appointments, service items 7 Education Personnel, opening service hours adjusted to student breaks, service items 8 Personnel Education, have positive attitudes, service items 9 Education Staff, have good communication skills, service items 11 Education Personnel, provide comfort in obtaining services, and service items 12 Education Personnel, open and close service hours on time.
- Academic Aspect: i.e. service items 17 Lecturers have positive attitudes, service items 18 Lecturers have good communication skills, and service items 19 Lecturers provide feedback on student learning progress
- Reputation: i.e. 21 Department of service items have a good professional reputation, 25 Department of service items have a service quality assurance program (such as ISO series), and 29 Department of service items have well-educated and experienced Lecturers
- Access: i.e. service items 31 The Department gives equal treatment and appreciation to all students in any service, service items 32 Department gives equal justice and freedom to all students in any service, service items 33 Department maintains the confidentiality of student information, service items 34 The Department makes it easy for students to contact all staff, service items 36 The Department provides feedback on the progress of student learning outcomes, and 37 service items The Department has Standard Operating Procedures (SOPs) in terms of service to students.

CONCLUSION

In summary, we can conclude that there are 10 service items that must get priority in improving quality performance, especially those in quadrant III (Urgent Action) in the IPCA analysis.

Improvements in service quality performance can be made based on these service items, including:

- Tend Tendent awareness-raising in conducting administrative services by placing students as the main focus in service and implementing SOP services that are more simple and easily understood by themselves and for students.
- Osen Lecturers can spend sufficient time in providing guidance and consultation for students in the academic and non-academic fields both as lecturers and lecturers as guardians. Because in the teaching and learning process, the lecturer factor is very influential for the achievement of learning objectives in higher education.
- Provide the main and supporting facilities, facilities and infrastructure for teaching and learning activities (class buildings, reading rooms, laboratories, etc.) and adequate guidance for students, as well as maintaining cleanliness, safety, and comfort including arrangements for lecture participants that do not exceed the amount allowed in law. Then striving for ease in reaching the campus by intensifying campus bus and campus bicycle facilities.
- Develop existing student activity units with the addition of facilities and encourage the formation of varied new student activity units to help students channel their interests and talents in organizing.
- Development of a syllabus based on student characteristics, conditions of the department and adapted to technological developments and competency needs in the world of work.

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