Evaluation of Enterprise University Website Service Quality using E-Servqual and IPA Methods

Valen Zidana Erlita[1*], Aries Dwi Indriyanti[2]
[1,2]State University of Surabaya

Address: Jl. Raya Kampus Unesa, Lidah Wetan, Kec. Lakarsantri, Surabaya
Author's Correspondence: valenzidanae@gmail.com[1*]

Abstract. The Enterprise University Website is an academic platform for internship students and employees at PT Petrokimia Gresik. This study aims to measure user satisfaction with the Enterprise University website and identify priority improvements using the e-Servqual and IPA methods. The e-Servqual method is applied through seven dimensions: Efficiency, System Availability, Fulfillment, Privacy, Responsiveness, Compensation, and Contact. Based on these, service indicators that should be the main focus for improvement are determined using the Importance-Performance Analysis (IPA) method. This research is a quantitative study. The sample consists of 49 Merdeka internship students at PT Petrokimia Gresik who are also users of the Enterprise University website. The results show that based on e-Servqual calculations, the overall average gap between user perceptions and expectations is (-0.61). This indicates that the service quality of the Enterprise University website is still lacking and does not provide user satisfaction. Furthermore, data analysis using the IPA method, as shown in the Cartesian diagram, reveals that the top improvement priorities lie in three indicators located in Quadrant I. The findings of this study can serve as a basis for strategic decision-making by platform managers to optimize services and enhance user satisfaction in the academic processes at PT Petrokimia Gresik.

Keywords: Enterprise University Website, E-Servqual, GAP, Improvement Priority, Service Quality

Abstrak. Website Enterprise University merupakan platform akademik bagi mahasiswa magang dan karyawan di PT Petrokimia Gresik. Penelitian ini bertujuan untuk mengukur kepuasan pengguna terhadap website Enterprise University serta mengidentifikasi prioritas perbaikan layanan dengan menggunakan metode e-Servqual dan Importance-Performance Analysis (IPA). Metode e-Servqual diterapkan melalui tujuh dimensi, yaitu: Efisiensi, Ketersediaan Sistem, Pemenuhan, Privasi, Responsivitas, Kompensasi, dan Kontak. Berdasarkan dimensi-dimensi tersebut, indikator layanan yang menjadi fokus utama perbaikan ditentukan dengan menggunakan metode IPA. Penelitian ini merupakan studi kuantitatif. Sampel terdiri dari 49 mahasiswa magang Merdeka di PT Petrokimia Gresik yang juga merupakan pengguna website Enterprise University. Hasil penelitian menunjukkan bahwa berdasarkan perhitungan e-Servqual, rata-rata selisih (gap) keseluruhan antara persepsi dan harapan pengguna adalah (-0,61). Hal ini menunjukkan bahwa kualitas layanan dari website Enterprise University masih kurang dan belum memberikan kepuasan kepada pengguna. Selanjutnya, analisis data menggunakan metode IPA yang divisualisasikan melalui diagram Kartesius menunjukkan bahwa tiga indikator yang berada di Kuadran I merupakan prioritas utama untuk dilakukan perbaikan. Temuan dari penelitian ini dapat menjadi dasar dalam pengambilan keputusan strategis oleh pengelola platform untuk mengoptimalkan layanan serta meningkatkan kepuasan pengguna dalam proses akademik di PT Petrokimia Gresik.

Kata kunci: E-Servqual, GAP, Kualitas Layanan, Prioritas Perbaikan, Website Enterprise University

1. INTRODUCTION

A website is a collection of interrelated pages containing digital information, which provides content to visitors and can serve as a communication tool between users and the organization that owns the site (Andriyan, Septiawan, and Aulya 2020). In addition to enhancing public trust in an organization, a high-quality website also plays a vital role in improving user satisfaction. For instance, PT Petrokimia Gresik—one of the leading fertilizer and chemical manufacturing companies in Indonesia—has implemented the Enterprise

University website to support teaching and learning processes, assignment preparation, and other academic activities for employees and internship students.

Users' expectations regarding website performance and quality are continually increasing. They seek an intuitive, fast, and secure experience when using digital platforms. Users of the Enterprise University website at PT Petrokimia Gresik face a variety of significant issues that hinder the smooth execution of academic activities and reduce user satisfaction. Several users have reported poor website performance, such as slow page loading times, difficult login processes, and frequent errors or unresponsiveness in the assignment submission feature. These issues make it challenging for internship students to submit assignments on time and create obstacles for mentors in accessing and evaluating the submitted tasks. These problems highlight the urgent need for evaluating and improving the website's quality.

User satisfaction is a key indicator of a digital platform's success, and a comprehensive evaluation can provide valuable insights for continuous improvement (Lemon et al. 2024). By using the e-Servqual and IPA methods, this study can provide accurate data for strategic decision-making and ensure that improvements made are truly aligned with user needs.

According to Parasuraman, Zeithaml, and Berry, the e-Servqual method is a framework used to measure the gap between users' expectations and perceptions of the electronic service quality they receive (Parasuraman, Zeithaml, and Malhotra 2005). The Importance-Performance Analysis (IPA) method is a technique used to prioritize attributes based on the measurement of performance and importance, by analyzing the extent to which users' perceived performance aligns with their desired level of satisfaction (Wisudawati et al. 2023). The goal is to identify priority areas for improvement and to optimize resource management efficiency.

The E-SERVQUAL and IPA methods are applied in this study with the expectation of providing a clear overview of user satisfaction levels and identifying areas that require immediate improvement priorities. In this way, PT Petrokimia Gresik can ensure that the Enterprise University website they manage delivers an optimal user experience and supports the achievement of both the company's academic and business objectives.

2. RESEARCH METHOD

This study employs a quantitative method with the aim of identifying the level of user satisfaction with the services provided by the Enterprise University website. The source of user data in this research comes from original data collected from Merdeka internship students at PT Petrokimia Gresik. A questionnaire, which had been tested for validity and reliability, was then distributed.

The results were further analyzed using the E-SERVQUAL and IPA methods to determine the level of user satisfaction and to identify which services should be prioritized for improvement. The complete flow of the research process is illustrated in Figure 1.
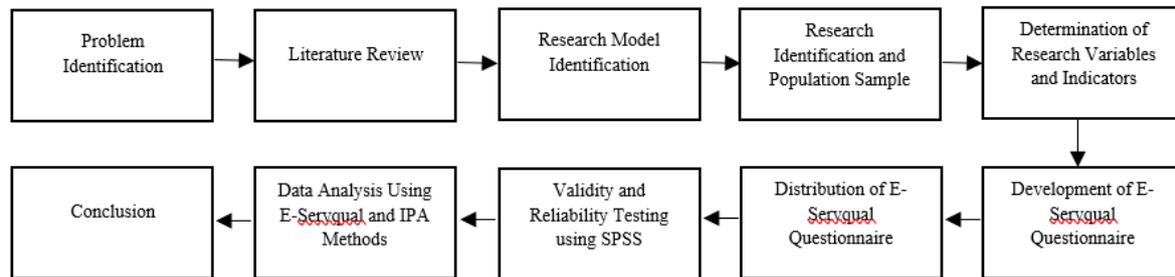

Figure 1. Research Flow

Problem Identification

Problem identification is an initial stage to obtain a clear interpretation or understanding of an issue before determining the next corrective actions (Lukman and Indrawati 2024). In this thesis, the problem identification focuses on measuring the performance of the Enterprise University website as a means of evaluating user satisfaction. Through this evaluation, user expectations and perceptions can be understood, and improvement priorities for the Enterprise University website can be identified.

Literature Review

Literature review is the process of obtaining data or information by collecting, identifying, and analyzing various relevant sources to help understand a research problem (Nguyen et al. 2023). In this study, the literature review was conducted by examining previous scholarly works such as books, journals, and research reports related to service quality measurement using the e-Servqual and IPA methods. A literature review facilitates the research process by allowing the researcher to understand the progress of previous studies, identify knowledge gaps, and acquire appropriate theories and methods for the research being conducted.

Research Model Identification

The research model is an approach used in scientific research to obtain data relevant to the area of study. This study applies the e-Servqual and IPA methods. The e-Servqual method compares users' expectations and perceptions of an electronic service (Maharani, Swastika, and Astawa 2023). It serves as an appropriate model for measuring the quality of electronic services. E-Servqual consists of seven main dimensions: efficiency, system availability, fulfillment, privacy, responsiveness, compensation, and contact. After calculating the gap

between user expectations and perceptions using the e-Servqual method, the results are analyzed further using the IPA method by creating a Cartesian diagram to identify which service dimensions require immediate improvement. In this study, the service indicators located in Quadrant I are considered the top priority for improvement.

Research Identification and Population Sample

The object of this research is the Enterprise University website. Enterprise University is the official digital portal owned by PT Petrokimia Gresik, which serves as a platform to support academic activities and provide information for all employees and internship students. The dashboard of the Enterprise University website is shown in Figure 2.
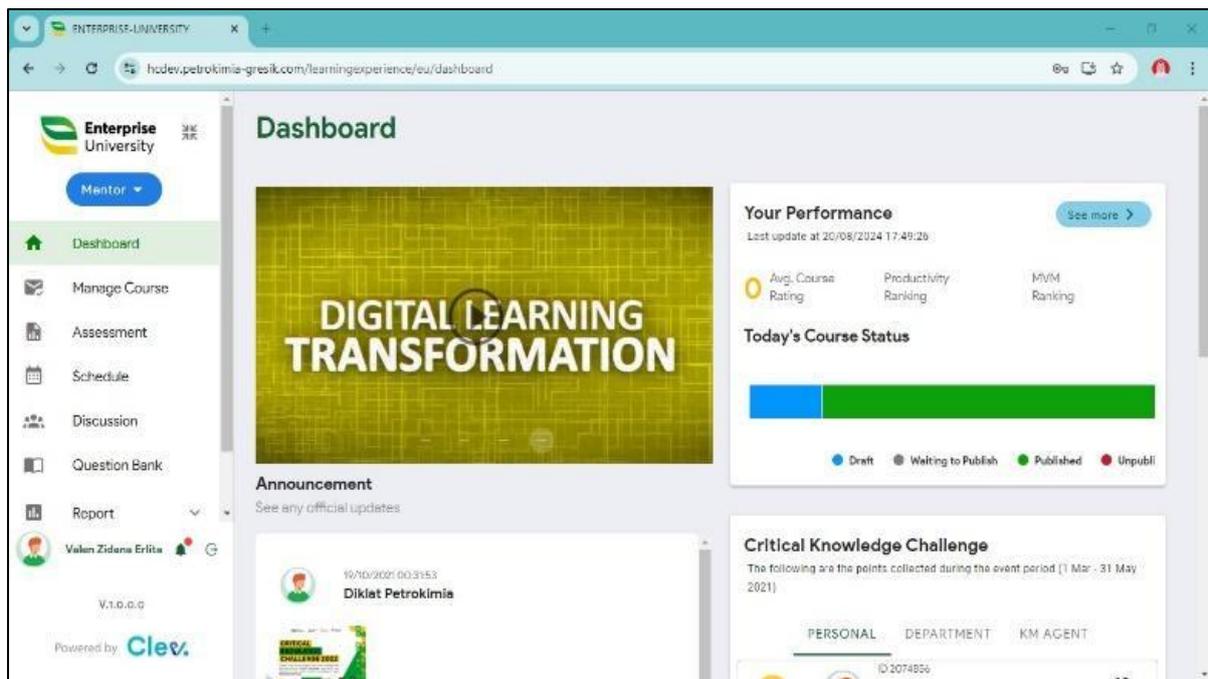
Figure 2. Dashboard Enterprise University Website

In this study, the population data consists of 49 Merdeka internship students at PT Petrokimia Gresik who participated in activities during the period from February 16 to June 30, 2024 (five months). The sampling technique used in this research is non-probability sampling, where the sample is selected based on specific criteria—in this case, Merdeka internship students of PT Petrokimia Gresik Batch 6. Based on the available data, the type of sampling applied is saturated sampling. Saturated sampling is a technique in which all members of the population are used as research samples. The user data of the Enterprise University website can be seen in Figure 3.

PETROKIMIA GRESIK
Daftar Peserta Program Magang Merdeka Belajar Kampus Merdeka
Petrokimia Gresik Periode 16 Februari - 30 Juni 2024

No	Name	NIM	University	Unit Kerja
1	Vany Erdiyanti Pratama	042111333005	Universitas Airlangga	Dep Portofolio Bisnis
2	Rafifah Aliefia Putri	042111333153	Universitas Airlangga	Dep Teknik & Bisnis
3	Sabina Diva Permatasari Putri	210810301013	Universitas Jember	Dep Pelaporan Keuangan & Manajemen
4	Fattaahridha Ichsani Cahyaningtiar	210810301113	Universitas Jember	Dep Pelaporan Keuangan & Manajemen
5	Regina Ayu Septia Adriafirna	21024010172	Universitas Pembangunan Nasional Veteran Jawa Timur	Dep Administrasi Pemasaran
6	Safrina Khalisah Intan Rahmadani	21024010078	Universitas Pembangunan Nasional Veteran Jawa Timur	Dep Administrasi Pemasaran
7	Muhammad Naufal Majid	215040207111060	Universitas Brawijaya	Dep Riset
8	Husain Fadlullah	082011533012	Universitas Airlangga	Dep Riset
9	Natanael Hari Wijaya	5005201010	Institut Teknologi Sepuluh Nopember	Dep Riset
10	Firsta Budya	215090100111036	Universitas Brawijaya	Dep Riset
11	Zildan Basara	20458327BI10560	Universitas Gadjah Mada	Dep Riset
12	Fajar Fatkhurrohman	B1A021072	Universitas Jenderal Soedirman	Dep Riset
13	Kirana Dyanty Adhe Soranda Sophie	5012201136	Institut Teknologi Sepuluh Nopember	Komp Pengembangan
14	Astridea Hasni Aurelita	5012201004	Institut Teknologi Sepuluh Nopember	Komp Pengembangan
15	Mochammad Ilham Yunanto	5012201164	Institut Teknologi Sepuluh Nopember	Dep Rancang Bangun
16	Roshinta Tri Fitrianita	21043010128	Universitas Pembangunan Nasional Veteran Jawa Timur	Dep Komunikasi Korporat
17	Muhammad Asfari Khafifan	2141150060	Politeknik Negeri Malang	Dep Perencanaan Strategi Pemeliharaan
18	Elyan Rizqi Dzakiri	5022201086	Institut Teknologi Sepuluh Nopember	Dep Rancang Bangun
19	Hafizh Rayhan Kavindra	20460176TK50765	Universitas Gadjah Mada	Dep Reliability
20	Willy Eka Surya	5009201113	Institut Teknologi Sepuluh Nopember	Dep Rancang Bangun
21	Angga Putra Aditya Pratama	215080100111037	Universitas Brawijaya	Dep Lingkungan
22	Rafi Dimas Putra Wibowo	082011133060	Universitas Airlangga	Dep Lingkungan
23	Firyal Hanifah Nurfajri	214140200111015	Universitas Brawijaya	Dep Pengembangan SDM & Organisasi
24	Rizka Zakkia Alfianti	5030211003	Institut Teknologi Sepuluh Nopember	Dep Keselamatan & Kesehatan Kerja
25	Alya Nur Sabrina	3032110701	Universitas Internasional Semen Indonesia	Dep Administrasi Pemasaran
26	Jasmine Nur Fadhila Muktia	215020200111043	Universitas Brawijaya	Dep Pengembangan SDM & Organisasi
27	Echa Aulia Putri Abdillah	20012061	Universitas Wijaya Putra	Dep Inovasi & Sistem Manajemen
28	Muhammad Rizki Arrasidi	5033211056	Institut Teknologi Sepuluh Nopember	Dep Remunerasi & Hubungan Industrial
29	Yasmin Nabila Setyawan	5010201063	Institut Teknologi Sepuluh Nopember	Dep Inspeksi Teknik Statik
30	Muhammad Hafidzul Islam	5010201186	Institut Teknologi Sepuluh Nopember	Dep Audit Operasi & Produksi
31	Nathaniel Allan Krisira	215060707111043	Universitas Brawijaya	Dep Perencanaan & Penerimaan Barang/Jasa
32	Valen Zidana Erlita	21051214065	Universitas Negeri Surabaya	Dep Keamanan
33	Muhammad Rizqon Maulana	215150201111022	Universitas Brawijaya	Dep Inovasi & Sistem Manajemen
34	Ni Made Ayu Astina Sari	215150301111035	Universitas Brawijaya	Dep Pengadaan Jasa
35	Annisa Rizki Nurvitasari	21481141EK23635	Universitas Gadjah Mada	Dep Administrasi & Penjualan

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Daftar Peserta Program Magang Merdeka Belajar Kampus Merdeka
Petrokimia Gresik Periode 16 Februari - 30 Juni 2024

No	Name	NIM	University	Unit Kerja
36	Mohammad Raffi Bachtiar Ar Rozaq	210413623455	Universitas Negeri Malang	Dep Administrasi & Penjualan
37	Mujtahiddin Assyiddiecky	20012010267	Universitas Pembangunan Nasional Veteran Jawa Timur	Dep Administrasi & Penjualan
38	Kharisma Putri Setiya Wardhany	152110813069	Universitas Airlangga	Proyek Barang Reject
39	Shavira Arinda Damayanti	152110813048	Universitas Airlangga	Project Retail Management
40	Miladia Faizin	5011201033	Institut Teknologi Sepuluh Nopember	Dep Inspeksi Teknik Statik
41	Alvin Bagus Firmansyah	5011201076	Institut Teknologi Sepuluh Nopember	Dep Inspeksi Teknik Statik
42	Dzikra Arrahman	5007201145	Institut Teknologi Sepuluh Nopember	Dep Inspeksi Teknik Statik
43	Bayu Wiranata	20463463TK51455	Universitas Gadjah Mada	Dep Inspeksi Teknik Statik
44	Alessandro Del Piero	5008211081	Institut Teknologi Sepuluh Nopember	Dep Proses & Pengendalian Kualitas
45	Indriyani Rihadatul Aisy	5008211032	Institut Teknologi Sepuluh Nopember	Dep Produksi II A
46	Hernanda Aldian Syah	5008211069	Institut Teknologi Sepuluh Nopember	Dep Produksi III A
47	Bryllian Michael Haholongan Kendek	5008211095	Institut Teknologi Sepuluh Nopember	Dep Produksi II B
48	Kintamani Saraswati Andini	20456249TK50379	Universitas Gadjah Mada	Dep Rancang Bangun
49	Kanesya Najah Abidin	21031010183	Universitas Pembangunan Nasional Veteran Jawa Timur	Dep Produksi III A

Figure 3. User Data

Determination of Research Variables and Indicators

1. E-Servqual Dimensions

Measurement of electronic service quality based on the gap between user expectations and perceptions can be carried out using the e-Sevqual dimensions. E-Servqual consists of seven main dimensions that help evaluate key aspects of an electronic service, including digital services such as the Enterprise University website. The following is an explanation of each e-Servqual dimension:

a) Efficiency

Relates to the ease and speed with which users can access information on a website or application. Efficiency includes the user's ability to retrieve information with minimal effort. It can also be observed through the time required to load a page and the responsiveness of the site to user interactions.

b) System Availability

Refers to the availability of system functions that allow users to interact with the site without interruptions. System availability includes the system's ability to handle high user traffic at any time without experiencing downtime.

c) Fulfillment

The degree to which the site successfully delivers the promised services to users. Failure in fulfillment can lead to dissatisfaction and a loss of user trust.

d) Privacy

Ensures the security of all user information and trust that the data will not be misused or shared without consent. Privacy is a critical dimension because customer trust depends on how securely their information is handled.

e) Responsiveness

Relates to how quickly and accurately the site responds to user inquiries and complaints. This includes the site's ability to provide user support through various communication channels. Responsiveness to user needs reflects the company's concern for user satisfaction.

f) Compensation

Refers to company policies in addressing problems encountered by users during the service process. Clear compensation policies can help restore trust after an issue occurs.

g) Contact

The availability of communication channels for users to reach customer service when assistance is needed. The contact dimension is important because it assures users that help is readily available in case of problems or questions about the service.

2. IPA Variables

This study uses the IPA (Importance-Performance Analysis) method to help determine improvement priorities for service dimensions on the Enterprise University website by mapping them into four quadrants. Service dimensions or indicators that fall into Quadrant I are considered top priorities for immediate improvement

Development of E-Servqual Questionnaire

The development of a research questionnaire is a step taken to collect data by providing a set of questions or statements to the respondents targeted by the researcher (Sholihah and Indriyanti 2022). At this stage of the research, the questionnaire is developed based on the seven dimensions of e-Servqual, each of which includes indicators used to formulate the questionnaire statements to be distributed. The researcher uses the seven e-Servqual dimensions: efficiency, system availability, fulfillment, privacy, responsiveness, compensation, and contact. The following Table 1 contains the dimensions, indicators, sources, questions, and codes based on the e-Servqual method:

Table 1. E-Servqual Questionnaire

Dimensions	Indicator	Source	Questions	Code
Efficiency	User-friendliness	(Parasuraman et al. 2005)	The Enterprise University website makes it easy to find what I need	A1
			The Enterprise University website is easy to understand and use, even for beginners	A2
			The available information is easy to access because the site is well-organized.	A3
	Access speed		The Enterprise University website loads pages quickly	A4
			The Enterprise University website allows me to submit assignments quickly	A5
System Availability	Proper technical functionality	(Parasuraman et al. 2005)	The Enterprise University website is always available and accessible anytime and anywhere I need it	B1
			The Enterprise University website does not experience system failures.	B2
			The website pages do not freeze after I access the assignment submission page	B3
Fulfillment	Service promise	(Parasuraman et al. 2005)	Academic information is always available as scheduled	C1
			The Enterprise University website provides services to access all learning materials	C2
			The Enterprise University website quickly updates the	C3

			progress of submitted assignments	
Privacy	Site security	(Parasuraman et al. 2005)	I feel safe when submitting assignments on the Enterprise University website	D1
			The Enterprise University website ensures that submitted assignments are not misused	D2
	User information protection		The Enterprise University website protects users' personal data	D3
			Does not share my personal information with other parties	D4
Responsiveness	Quick response	(Parasuraman et al. 2005)	Responds quickly to users' questions	E1
	Effective problem handling		Informs what to do when assignment submission cannot be processed	E2
			Provides immediate assistance when encountering issues related to the Enterprise University website	E3
Compensation	Compensation when problems occur	(Parasuraman et al. 2005)	The Enterprise University website provides compensation for issues caused	F1
			Grants deadline extensions when assignment submission cannot be completed due to website errors	F2
	Provision of rewards		Provides rewards (benefits) when I submit a course	F3

Contact	Online assistance is available	(Parasuraman et al. 2005)	The Enterprise University website provides a phone number to contact the company	G1
			Interactions with customer service representatives are satisfactory and help resolve my issues	G2
			Customer service is available 24 hours a day	G3

The questionnaire model uses a Likert scale to measure the level of users' expectations and perceptions of the Enterprise University website. This social phenomenon is specifically defined by the researcher and referred to as a research variable. The expectation scale ranges from 1 (very unimportant) to 4 (very important), while the perception scale ranges from 1 (very poor) to 4 (very good). The interpretation score table for the criteria can be seen in Table 2.

Table 2. Likert Scale

Score Interpretation Criteria		
Score	**Expectation**	**Perception**
1	Very Unimportant	Very Poor
2	Unimportant	Poor
3	Important	Good
4	Very Important	Very Good

Distribution of E-Servqual Questionnaire

The e-Servqual questionnaire is distributed to assess the extent of users' expectations and perceptions regarding the quality of the Enterprise University website. The resulting gap analysis data will then be further processed using the IPA method to identify the service dimensions that require the most urgent improvements based on user needs.

Validity and Reliability Using SPSS

Validity testing is essentially used to measure the suitability between the instrument and the object being measured. According to Risandi in the study by Hakim and Sulistiyowati (2002), the minimum requirement for data to be considered valid is that the calculated r-value (r count) must be greater than the r-table value (Hakim and Sulistiyowati 2022). Reliability

testing is a tool used to measure the consistency of an instrument, specifically the extent to which the measurement results remain consistent when the data is tested repeatedly. One common technique is Cronbach's Alpha, which considers an instrument reliable if the Alpha value is greater than 0.6 (Hakim and Sulistiyowati 2022).

Data Analysis Using E-Servqual and IPA Methods

A. Data analysis using e-servqual method

Calculation of user expectation scores and user perception scores on the quality of the Enterprise University website using e-Servqual method. The questionnaire data obtained is used to calculate the gap using the following formula:

$$\text{Scores e-Servqual (Gap)} =$$
$$\text{Perceptions (Yi)} - \text{Expectations (Xi)}$$

Description:

Yi = average score of user perceptions

Xi = average score of user expectation

With the following conditions:

If the value is positive (>0), perception exceeds expectation (very satisfying).

If the value is zero (0), perception matches expectation (satisfying).

If the value is negative (<0), perception falls below expectation (unsatisfying).

Next, the average score is calculated for each e-Servqual dimension (efficiency, system availability, fulfillment, privacy, responsiveness, compensation, and contact).

B. Data analysis using IPA method

Data Analysis Using Importance-Performance Analysis (IPA) to Determine Service Dimension Improvement Priorities on the Enterprise University Website. Here are the steps taken:

a) Identifying the aspect or indicators to be evaluated

b) Developing a research instrument in the form of a questionnaire used to obtain assessments of the importance and performance levels of the Enterprise University website.

c) Calculating the average scores of importance (expectation) and performance (perception) for each indicator.

d) Mapping the average importance (expectation) and perception scores into a two-dimensional matrix, where the vertical axis represents the average importance score and the horizontal axis represents the average performance (perception) score.

Based on the research results regarding the levels of importance and performance, a suitability level calculation is generated, comparing the importance level with the performance level. The level of suitability reflects the extent to which actual performance meets expectations, and it is used to determine the priority order for improving factors that influence customer satisfaction.The following formula is used to determine the level of suitability (Wisudawati et al. 2023).

$$\textbf{\textit{Tki}} = \frac{Xi}{Yi} \text{ x } 100\%$$

Description:

Tki = Suitability Level

Xi = Importance Score

Yi = Performance Score

3. RESULT AND DISCUSSION

Research Data Description

As previously explained, the respondents of this study were limited and specifically targeted to students participating in the Merdeka Internship program at PT Petrokimia Gresik for a duration of five months. Before discussing the research findings, a general overview of the respondents will first be presented. This includes user names, email addresses, phone numbers, and the frequency of Enterprise University website usage during the internship period. The general information was obtained through the questionnaire responses, whereas more detailed data such as full name, student ID number, university name, department (unit of work), and the number of completed courses were provided by the company. Table 3 below shows the frequency of Enterprise University website usage.

Table 3. Frequency Usage

Frequency of Enterprise University Website Usage	Number of Respondents	Percentage
Less than 5 times (<5)	8	16%
More than 5 times (>5)	14	29%
More than 10 times (>10)	27	55%

Result of Research Instrument Testing

A. Respondent's Data Validity Test

The validity test conducted in this study is a content validity test, which aims to ensure the alignment of the instrument's content with the research objectives (Puspitasari and Febrinita 2021). The validity test in this study was conducted using SPSS version 30. The validity test using SPSS can be performed with the Pearson Bivariate technique (Janna and Herianto 2021). The Pearson Bivariate technique is a correlation method used to test the validity of instruments or indicators by correlating each item score with the total score. If the test results indicate that an instrument is not valid, the item may be replaced or removed.

The validity test was conducted prior to distributing the questionnaire with validated statements to the research sample. In this study, the validity test was carried out on 15 respondents outside of the Merdeka Internship students at PT Petrokimia Gresik. In the validity test calculation, an instrument is considered valid if the calculated r-value (r count) is greater than the r-table value. However, if the r count is smaller than the r table, the instrument is considered invalid. With 15 respondents and a significance level of 5 percent, the r-table value is 0.514 (Yufrinalis, Nogo, and Outcomes 2021). Table 4 and 5 below presents the validity test results for each dimension of e-Servqual using SPSS version 30:

Table 4. Expectations Validity Test

Statement item	r count	r table	Description
XA1	0,688		Valid
XA2	0,867		Valid
XA3	0,781		Valid
XA4	0,912		Valid
XA5	0,853		Valid
XB1	0,669		Valid
XB2	0,856		Valid
XB3	0,744		Valid
XC1	0,843		Valid
XC2	0,871	0,514	Valid
XC3	0,783		Valid
XD1	0,836		Valid
XD2	0,694		Valid
XD3	0,837		Valid
XD4	0,874		Valid
XE1	0,925		Valid
XE2	0,923		Valid
XE3	0,885		Valid
XF1	0,672		Valid
XF2	0,939		Valid
XF3	0,813		Valid
XG1	0,947		Valid
XG2	0,821		Valid
XG3	0,948		Valid

Table 5. Perceptions Validity Test

Statement item	r count	r table	Description
YA1	0,863		Valid
YA2	0,765		Valid
YA3	0,686		Valid
YA4	0,774		Valid
YA5	0,722		Valid
YB1	0,723		Valid
YB2	0,883		Valid
YB3	0,564		Valid
YC1	0,710		Valid
YC2	0,742	0,514	Valid
YC3	0,617		Valid
YD1	0,861		Valid
YD2	0,750		Valid
YD3	0,708		Valid
YD4	0,807		Valid
YE1	0,800		Valid
YE2	0,723		Valid
YE3	0,875		Valid
YF1	0,734		Valid
YF2	0,884		Valid
YF3	0,853		Valid
YG1	0,820		Valid
YG2	0,672		Valid
YG3	0,912		Valid

The results of the validity test calculation on the perception questionnaire for the contact dimension show that all statement items developed by the researcher are valid, as the r count value for each item in the contact dimension is greater than the r table value.

B. Respondent's Data Reliability Test

The reliability test is conducted to obtain research results that are trustworthy and proven accurate, as they are not influenced by chance or measurement errors. The reliability test used in this study is an internal reliability test, which serves as a tool to measure the extent

to which items within an instrument are interrelated and produce consistent responses in a single measurement (Subhaktiyasa n.d.). Based on the reliability coefficient criteria:

a. If the Cronbach's Alpha value is greater than the critical value (0.60), the research instrument is considered reliable.

b. If the Cronbach's Alpha value is less than the critical value (0.60), the research instrument is considered unreliable.

a) Expectation

The results of the reliability test on all expectation questionnaires show that all statement items developed by the researcher are reliable, as the Cronbach's Alpha value is greater than the critical value (> 0.60). Figure 4 below presents the reliability test results of the expectation questionnaire used in this study.

Reliability Statistics

Cronbach's Alpha	N of Items
.965	24

Figure 4. Expectation Statistics Reliability

Figure 5 below presents the reliability test section of the expectation questionnaire. The reliability test was conducted to measure the internal consistency of each statement item.

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
XA1	76.6000	262.686	.657	.964
XA2	76.8000	260.886	.780	.963
XA3	76.6667	262.667	.549	.965
XA4	77.0000	247.286	.859	.962
XA5	77.0000	252.429	.757	.963
XB1	76.7333	262.638	.560	.965
XB2	76.8000	253.029	.778	.963
XB3	76.5333	260.981	.648	.964
XC1	76.5333	258.838	.904	.962
XC2	76.6667	261.810	.631	.964
XC3	76.4667	261.552	.628	.964
XD1	76.5333	260.410	.739	.963
XD2	76.6667	256.952	.738	.963
XD3	76.5333	262.695	.737	.963
XD4	76.6667	257.095	.733	.963
XE1	76.9333	243.638	.854	.962
XE2	76.5333	258.981	.897	.962
XE3	76.4667	262.695	.652	.964
XF1	76.7333	267.924	.476	.965
XF2	77.0000	240.286	.961	.961
XF3	76.6000	259.400	.784	.963
XG1	76.6667	258.810	.626	.964
XG2	76.2667	269.781	.732	.964
XG3	76.6000	259.686	.875	.962

Figure 5. Expectation Reliability Test

Based on the calculation results above, the Cronbach's Alpha value obtained from the expectation questionnaire is 0.965, which indicates that the expectation questionnaire is reliable and has a very high level of reliability.

b) Perception

The results of the reliability test on all perception questionnaires show that all statement items developed by the researcher are reliable, as the Cronbach's Alpha value is greater than the critical value (> 0.60). Figure 6 below presents the reliability test results of the perception questionnaire used in this study.

Reliability Statistics

Cronbach's Alpha	N of Items
.945	24

Figure 6. Perception Reliability Test

Figure 7 below presents the reliability test section of the perception questionnaire. The reliability test was conducted to measure the internal consistency of each statement item.

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
YA1	62.2000	194.029	.786	.942
YA2	62.2000	198.600	.484	.945
YA3	62.2000	197.029	.454	.946
YA4	62.5333	190.267	.865	.940
YA5	62.1333	197.981	.525	.944
YB1	62.1333	194.838	.546	.944
YB2	62.7333	192.352	.622	.943
YB3	62.4000	202.971	.325	.946
YC1	62.0000	195.429	.613	.943
YC2	62.0667	188.638	.745	.942
YC3	62.3333	199.952	.414	.946
YD1	62.1333	184.981	.810	.941
YD2	61.8667	197.124	.599	.944
YD3	61.8000	198.743	.437	.946
YD4	62.0667	191.067	.709	.942
YE1	62.3333	194.238	.666	.943
YE2	61.8667	196.267	.512	.945
YE3	62.2667	188.638	.838	.940
YF1	62.3333	192.381	.749	.942
YF2	62.2667	186.638	.786	.941
YF3	62.0000	186.714	.779	.941
YG1	62.3333	193.667	.572	.944
YG2	61.8000	194.171	.572	.944
YG3	61.9333	192.067	.717	.942

Figure 7. Perception Reliability Test

Based on the calculation results above, the Cronbach's Alpha value obtained from the perception questionnaire is 0.945, which indicates that the perception questionnaire is reliable and has a very high level of reliability.

Data Processing Using E-Servqual (Electronic Service Quality)

The Table 6 and Table 7 presents the calculation results of the average respondent questionnaire scores for the expectation variable:

Table 6. Expectations

Variable Statement	Xi	n	X
XA1	161	49	3,28
XA2	175	49	3,57
XA3	164	49	3,34
XA4	163	49	3,32
XA5	157	49	3,20
XB1	169	49	3,44
XB2	168	49	3,42
XB3	162	49	3,30
XC1	151	49	3,08
XC2	170	49	3,46
XC3	167	49	3,40
XD1	170	49	3,46
XD2	164	49	3,34
XD3	170	49	3,46
XD4	169	49	3,44
XE1	163	49	3,32
XE2	162	49	3,30
XE3	171	49	3,48
XF1	154	49	3,14
XF2	175	49	3,57
XF3	174	49	3,55
XG1	144	49	2,93
XG2	165	49	3,36
XG3	165	49	3,36

Table 7. Perception

Variable Statement	Yi	n	Y
YA1	139	49	2,83
YA2	146	49	2,97
YA3	132	49	2,69
YA4	123	49	2,51
YA5	124	49	2,53
YB1	150	49	3,06
YB2	105	49	2,14
YB3	120	49	2,44
YC1	137	49	2,79
YC2	146	49	2,97
YC3	125	49	2,55
YD1	147	49	3,00
YD2	152	49	3,10
YD3	148	49	3,02
YD4	153	49	3,12
YE1	120	49	2,44
YE2	130	49	2,65
YE3	127	49	2,59
YF1	116	49	2,36
YF2	138	49	2,81
YF3	163	49	3,32
YG1	118	49	2,40
YG2	140	49	2,85
YG3	139	49	2,83

The table presented above shows the calculation results of the expectation and perception scores for each indicator. These scores were obtained by dividing the total score of each indicator by the number of respondents who participated. Through this process, expectation and perception scores were generated for each indicator individually. The calculated perception scores were then used for further analysis, namely to determine the gap value between perception and expectation (e-Servqual).

The results of the gap analysis between users' perceptions and expectations of service quality on the Enterprise University website owned by PT Petrokimia Gresik, based on the seven e-Servqual dimensions, are presented in Table 8 below. The gap value is calculated from

the difference between the average perception score and the average expectation score for each statement indicator. A negative gap indicates that the service quality has not met user expectations.

<div align="center">Table 8. Analysis E-Servqual</div>

No	E-Servqual Dimension	Perception (Y)	Expectation (X)	Gap/E-Servqual Value = (Y-X)	Description
1.	Efficiency	2,71	3,34	-0,63	Dissatisfactory
2.	System Availability	2,55	3,39	-0,84	Dissatisfactory
3.	Fulfillment	2,77	3,31	-0,54	Dissatisfactory
4.	Privacy	3,06	3,43	-0,37	Dissatisfactory
5.	Responsivennes	2,56	3,37	-0,81	Dissatisfactory
6.	Compensation	2,83	3,42	-0,59	Dissatisfactory
7.	Contact	2,69	3,22	-0,53	Dissatisfactory
	Mean	**2,74**	**3,35**	**-0,61**	Dissatisfactory

Data Processing Using IPA (Importance Performance Analysis)

The assessment of website service attributes, based on the comparison between user perception and expectation levels, identifies key attributes that require priority attention to improve service quality and user satisfaction. To determine which attributes need immediate improvement, the Importance Performance Analysis (IPA) method is used with the help of a Cartesian diagram. This is based on previously calculated average perception and expectation scores. The diagram aims to clearly highlight priority areas for improvement. Figure 8 below shows the Cartesian diagram.
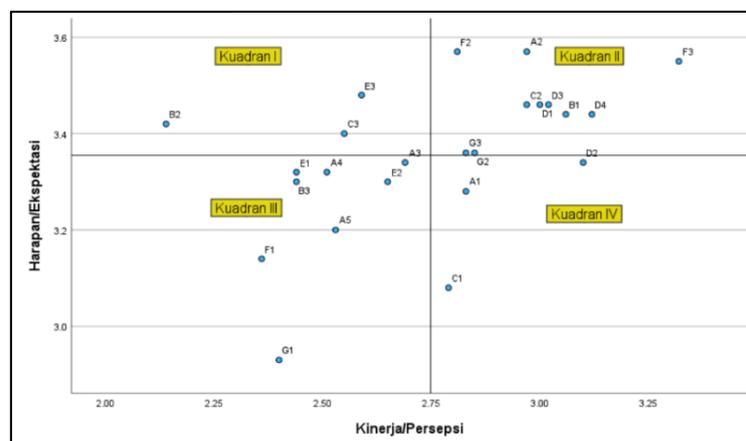

<div align="center">Figure 8. Carteism Diagram</div>

Based on the analysis of the Cartesian diagram used to determine service improvement priorities, several indicators fall into Quadrant I, where the attributes are considered important by users but have low performance. This means that high expectations have not been met, leading to user dissatisfaction. Quadrant I is also referred to as the main priority (*concentrate here*), indicating that the attributes within it need to be addressed immediately due to their significant impact on user satisfaction. Table 9 presents the indicators in Quadrant I that require immediate improvement priority.

Table 9. Quadrant I

No	Statements	Dimension	Indicator	Perception Level (X)
1.	The Enterprise University website does not experience system failures	*System Availability*	B2	2,14
2.	The Enterprise University website quickly updates the progress of submitted assignments	*Fulfillment*	C3	2,55
3.	Provides immediate assistance when encountering issues related to the Enterprise University website.	*Responsiveness*	E3	2,59

4. CONCLUSION

Based on the analysis using the e-Servqual method, a significant gap was found between user perceptions and expectations. There are 24 indicators across seven dimensions: Efficiency, System Availability, Fulfillment, Privacy, Responsiveness, Compensation, and Contact. All dimensions show negative gap values, indicating that the services provided by the Enterprise University website fall short of user expectations and do not yet deliver user satisfaction. The overall average gap value is -0.61, suggesting that the service quality has not optimally met user expectations.

Based on the analysis using the Importance Performance Analysis (IPA) method, improvement priorities are divided into four quadrants. The main focus is on Quadrant I (Concentrate Here), which includes three service indicators on the Enterprise University website that require immediate improvement. Meanwhile, the indicators in Quadrant IV (Possible Overkill) represent services that are already optimal and do not require further improvement.

5. ACKNOWLEDGEMENTS

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