

Application of the Customers Satisfaction Index (CSI) and Importance Performance Analysis (IPA) Methods to Measure Reader Satisfaction with the Quality of Website Services Indodaily.co

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Abstract

satisfaction and trust are indeed the most dominant problems in online news media, but the process to meet the reader's satisfaction is not easy. Because, there are many factors that can influence the achievement of the level of reader satisfaction. The quality of service provided will be one of the dominant factors that are considered by the reader on the level of perceived satisfaction. Through this study, the author aims to determine the level of reader satisfaction with the service quality of the Indodaily.co website by using the Customer Satisfaction Index (CSI) method to determine the level of reader satisfaction and the Importance Performance Analysis (IPA) method is used to determine the level of importance of each service attribute and priority. improvements that must be made by the Indodaily.co website. The results obtained from the Customer Satisfaction Index (CSI) method show that the overall level of satisfaction of Indodaily.co website visitors is included in the "Very Satisfied" category. While the calculation results are based on the Importance Performance Analysis (IPA) method, there are two attributes that need to be improved, seven attributes that must be maintained and ten attributes that need to be reduced in intensity by the Indodaily.co website.

Keywords

service quality; customer satisfaction index (CSI); importance performance analysis (IPA).



I. Introduction

The development of information technology is currently getting bigger because almost all business and organizational activities can be carried out through information technology intermediaries, one of which is through the internet. The internet has now become an important and inseparable part of human life in this digital era. With the internet, all the desired information can be easily obtained. One of the developments and uses of the internet is the existence of a website. According to (Bekti, 2015) a website is a collection of pages that are used to display text information, still or motion pictures, animations, sounds, or a combination of all of them, both static and dynamic which form a series of interrelated buildings, each of which is -each linked to page networks. Organization must have a goal to be achieved by the organizational members (Niati et al., 2021). The success of leadership is partly determined by the ability of leaders to develop their organizational culture. (Arif, 2019).

The use of information technology today has made many changes in people's lives, one of the impacts of the development of the internet is the media for obtaining news and

information. Currently, there is a change in the trend of obtaining news and information, which originally used print media to become online news media. With the increasing growth of internet media, it causes a decrease in public interest in print media. One of the media companies in Indonesia that uses the internet as a news media is Indodaily.co. Indodaily.co is a portal containing online news and articles in Indonesia. Indodaily.co office is located in Palembang city. This media was first published on August 17, 2021. Indodaily.co has used a website-based information system with the address indodaily.co. Indodaily.co website is a news media that contains the latest news in South Sumatra and also Nationally. The news presented by the Indodaily.co website includes news on political events, business, law, football, entertainment, lifestyle, automotive, science and technology to citizen journalism. All the news can be accessed through the Indodaily.co website page. Since the Indodaily.co website was established, no one has ever conducted research on the quality of the website from the Indodaily.co website, therefore Indodaily.co does not know whether the website they manage has good quality for its users.

Measurement of website service quality is very helpful to determine the satisfaction of readers or website visitors of an organization or agency to carry out a development. According to (Tjiptono, 2018) states that service quality is the expected level of excellence and control over the level of excellence to meet customer desires. There are several important things that are used as determining factors so that a website that runs can function properly and correctly is the use of the website, the services provided and especially the information presented. Without having an adequate website, it is difficult for agencies or organizations to improve the quality of a website. Indodaily.co website also needs to be measured to determine the quality and level of satisfaction of readers or visitors. One method that can be used to measure customer satisfaction is the Customer Satisfaction Index (CSI). Customer Satisfaction Index (CSI) is a method that uses an index to measure the level of customer satisfaction based on certain attributes (Budhi & Sumiari, 2017). The Customer Satisfaction Index is needed to determine the overall level of customer satisfaction by taking into account the importance of the product or service attributes. And there is one more method used, namely Importance Performance Analysis (IPA). Importance Performance Analysis is an analytical technique used to identify what important performance factors must be shown by an organization in meeting user satisfaction (Umam & Hariastuti, 2018).

Based on the background described above, the author intends to raise the issue as research material for the thesis with the title "Applying the Customer Satisfaction Index (CSI) and Importance Performance Analysis (IPA) Methods to Measure Reader Satisfaction with the Service Quality of the Indodaily.co Website".

II. Review of Literature

2.1 Website

According to (Bekti, 2015) A website is a collection of pages that are used to display text information, still or moving images, animations, sounds, and or a combination of all of them, both static and dynamic which form a series of interconnected buildings. linked sites, each of which is associated with page networks.

A website is usually placed on a web server that can be accessed via the internet, or a local area network (LAN) via an internet address known as a URL. The combination of all sites that can be accessed on the internet is also known as the World Wide Web or better known by the abbreviation WWW. A web page is a file written as a plain text file that is

organized and combined in such a way with HTML or XHTML-based instructions. Sometimes it is also inserted with a bit of scripting language. The file is then translated by a web browser and displayed like a page on a computer monitor. These web pages are accessed by users via a network communication protocol known as HTTP, in addition to improving the security and privacy aspects, the website can also implement.

2.2 Customer Satisfaction Index (CSI)

The Customer Satisfaction Index (CSI) is an index to determine the overall level of customer satisfaction with an approach that considers the importance of product or service attributes as measured by (Widodo & Sutopo, 2018).

CSI is used to determine the overall level of customer satisfaction by looking at and knowing the level of importance of service/product attributes. CSI is also very useful for the company's internal purposes, including monitoring service improvement, motivating employees and giving bonuses as an illustration that represents the level of customer satisfaction.

The customer satisfaction index (IKP) can be calculated in the following steps:

1. Determining *Mean Importance Score* (MIS) and Mean Satisfaction Score (MSS), these values are scaled from the average level of importance and performance.
2. Calculating *Weighting Factors* (WF), which is a function of the median importance of each attribute in the form of a percentage (%) of the total median score of importance for all tested attributes.
3. Calculating *Weight Score* (WS), which is a function of the median score of the satisfaction level of each attribute multiplied by the *Weighting Factors* (WF) of each attribute.
4. Calculating *Median Weight* (WMT), which is the total of the overall Weight Score (WS) value.
5. Calculating the consumer satisfaction index (*customer Satisfaction Index*), which is the calculation of the *Median Weight* (WMT) divided by the maximum scale, then multiplied by 100%.

Table 1. Criteria for CSI Values CSI

Values for CSI	Criteria
0.81-1.00	Very Satisfied
0.66-0.80	Satisfied
0.51-0.65	Quite Satisfied
0.35-0.50	Less Satisfied
0.00-0, 34	Dissatisfied

Source: Irawan (2002)

The overall calculation of IKP according to (Bhote, 1996) is illustrated in the table the average values in the interest column (I) are added up so that Y and also the product of I and P in the score column (S) are added up and obtained T. IKP obtained from the calculation $(T/5Y) \times 100\%$. The value 5 (at 5Y) is the maximum value used on the measurement scale. IKP is calculated by the formula:

$$CSI = \frac{T}{(5 \times Y)} \times 100\% \dots \dots \dots (1)$$

Information:

T: the score of (I) x (P)

5: the maximum value used on the measurement scale

Y: total (I) = (Y)

The maximum GPA value is 100%. A GPA value of 50% or lower indicates poor service performance. A GPA value of 80% or higher indicates that the user is satisfied with the service performance.

2.3 Importance Performance Analysis (IPA)

The *Importance Performance Analysis* is an easy application technique to measure the attributes of the level of importance and the level of implementation itself which is useful for developing an effective marketing program (Ruhimat, 2008).

The Importance Performance Analysis (IPA) method was first introduced by Martilla and James (1977) with the aim of measuring the relationship between consumer perceptions and priorities for improving product/service quality. Importance Performance Analysis or analysis of the level of importance and performance/customer satisfaction is a method of analyzing the level of consumer satisfaction with a product or service (Algifari, 2016). For factors that affect satisfaction, the following formula is used:

$$X' = 1 + \frac{\sum X_i}{n} \frac{\sum Y_i}{n} \dots\dots\dots(2)$$

Where:

X' = average score of performance level

Y' = average score of importance/expectation level

n = number of respondents

To analyze the data obtained the Importance Performance Analysis method (Martilla and James, 1977) or the analysis of the level of importance/satisfaction and performance by website users using the formula:

$$Tki = \frac{Xi/Yi}{100\%} \dots\dots\dots(3)$$

Where:

Tki: Level of suitability of respondent

Xi: Score of implementation/satisfaction assessment

Yi: Interest/expectancy assessment score

Analysis of the level of interest and consumer satisfaction can produce a Cartesian diagram that can show the location of the factors or elements that are considered to affect consumer satisfaction, where in the Cartesian diagram the factors will be described in four quadrants.



Figure 1. Analysis of the Performance of Interest

Furthermore, the level of these elements will be described and divided into four parts in the Cartesian diagram of the *Importance Performance* as follows (Martilla and James in Algifari, 2016):

1. Quadrant 1 is a service dimension that is considered important by customers or service users, but the company provides services with poor quality, so that this service dimension becomes a top priority for improvement.
2. Quadrant 2 service dimensions are considered important by customers or service users and the company has provided good quality service, so this service dimension must be maintained.
3. The 3-dimensional quadrant of service is considered less important by customers or service users and the company provides services of low quality, so that this service dimension becomes a low priority.
4. Quadrant 4 service dimensions that are considered unimportant by users or services, but the company or service provider provides services with good quality so that this service dimension becomes excessive.

2.4 Validity Test

According to (Ghozali, 2018) The instrument validity test is "a test used to measure the validity or validity of a questionnaire. A questionnaire as a research instrument is declared valid if the statement on the questionnaire is able to reveal something that will be measured by the questionnaire. The decision-making criteria to determine the validity of the data are if the calculated r value $>$ r table value at a significant level of 0.05 (5%), otherwise if the calculated r value $<$ r table value, then the instrument is said to be invalid and will be set aside for further analysis.

2.5 Reliability Test

According to (Ghozali, 2018) the reliability test is a tool to measure a questionnaire which is an indicator of a variable or construct. A questionnaire is said to be reliable or reliable if a person's answer to the statement is consistent or stable from time to time, where an instrument can be said to be reliable if it has a reliability coefficient or alpha of (a) $<$ 0.6 is unreliable, (b) 0.6 – 0.7 is acceptable, (c) 0.7 – 0.8 is good, and (d) 0.8 is very good.

2.6 Satisfaction

According to (Budhi & Sumiari, 2017) says that satisfaction is a feeling of pleasure or disappointment of someone who comes from a comparison between his impression of the perceived performance of a product (perceived performance) and his expectations (Expectation). Satisfaction or dissatisfaction is an assessment of the service, where the chosen alternative is at least equal to or exceeds user expectations. While user satisfaction is a level where the needs, desires and expectations of users can be met which will result in repeat visits or continued user loyalty. User satisfaction can also be defined as an affective response to the experience of making a specific visit or an evaluation of the perceived conformity or discrepancy between previous expectations and the actual performance of a website after the visit.

2.7 Service Quality

In the opinion (Budhi & Sumiari, 2017) service quality is a level of excellence expected by customers. If the service received or perceived is as expected, then the quality of service is said to be good and satisfactory. Conversely, if the service received or felt is not as expected, then the quality of service is said to be poor or unsatisfactory.

There are several concepts regarding the dimensions of service quality that are often used that are derived from Parasuraman, et al (1988), which shows that service quality is a

multidimensional understanding. Several dimensions are often used by researchers, namely:

1. *Reliability* (Reliability), namely the ability to provide services as promised exactly. This includes promises of good service, appropriate and prompt handling of complaints and the use of post-service communication.
2. *Responsiveness*, namely the willingness to help and provide good service to customers. This dimension emphasizes the behavior of personnel who provide services to pay attention to requests, questions and objections from customers.
3. *Assurance*, which is a service quality dimension that focuses on the ability to generate trust and confidence in customers. Assurance also means that employees are always courteous and have the knowledge and skills required to address any customer questions or concerns.
4. *Empathy* (Empathy), namely the aspect that emphasizes the treatment of consumers as individuals, understanding customer needs and caring to give individual attention.
5. *Tangibles* (Direct Evidence), namely the service dimension that focuses on the elements that represent the service physically. This dimension includes physical facilities (building architecture).

2.8 Thinking Framework

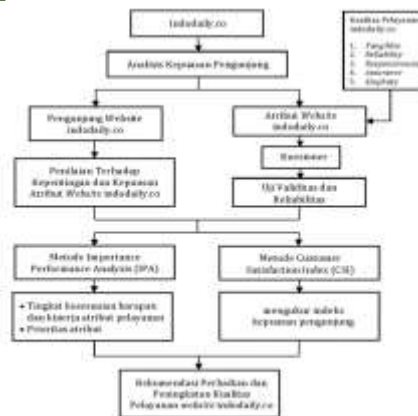


Figure 2. Thinking Framework

III. Research Method

3.1 The Types of Research

The method used in this study is an evaluation survey method. According to Sugiyono, (2016) "Survey research is research conducted on large or small populations, but the data studied are sample data taken from the population so that relative occurrences, distributions, and relationships between sociological or psychological variables are found".

3.2 Research Location

This research was conducted at Jalan Rasyid Siddiq Lorong Gading No 155 RT 028 RW 008 Kelurahan 7 Ulu, Sebrang Ulu District 1.

3.3 Sampling Techniques

In this study, the authors determined the sample size using the Slovin formula (Noor, 2011:158) with tolerance error 10% as follows:

$$n = \frac{N}{1 + (Ne^2)} \dots\dots\dots (4)$$

Where:
n = Research Sample
N = Research Population
e = Error Tolerance

The population (N) in this study is taken from *google analytics data on the Indodaily.co* website for one month, namely 8,500 active visitors during November 2021.

$$n = \frac{N}{1 + (Ne^2)}$$

$$n = \frac{8,500}{1 + (8,500 \times 0.1^2)}$$

$$n = \frac{8,500}{1 + (8,500 \times 0.01)}$$

$$n = \frac{8,500}{1 + 85}$$

$$n = \frac{8,500}{86}$$

$$n = 98.6$$

n = 99 The number of samples for the questionnaire

IV. Result and Discussion

4.1 Customer Satisfaction Index (CSI)

Measurement of the level of satisfaction is very important to find out how much performance the Indodaily.co website produces. The calculation of the *Customer Satisfaction Index* (CSI) uses the average score of the level of performance and the level of importance of each attribute. Based on the results of the calculations that have been done. Obtained a CSI value of 88.72%. The CSI value was obtained from the division of the total value of the *Weight Score* (WS) with the maximum scale used in this study 5 and multiplied by 100%. This can be seen from table 2.

Table 2. Analysis *Customer Satisfaction Index* (CSI)

Code	MIS	WF	MSS	WS
P1	4.47	5.33	4.40	23.48
P2	4.41	5.26	4.41	23.21
P3	4,35	5.19	4.35	22.58
P4	4.32	5.15	4.30	22.16
P5	4.35	5.19	4.44	23.05
P6	4.45	5.31	4.45	23.64
P7	4.38	5.22	4.38	22.90
P8	4.38	5.22	4.43	23.16
P9	4.45	5.31	4.51	23.91
P10	4.40	5.25	4.42	23,21
P11	4.38	5.22	4.43	23.16
P12	4.39	5.23	4.37	22.90
P13	4.40	5.25	4.43	23.27

P14	4.53	5.39	4, 54	24.45
P15	4.39	5.23	4.45	23.32
P16	4.40	5.25	4.42	23.21
P17	4.53	5.39	4.57	24.61
P18	4.44	5.29	4.49	23.80
P19	4.46	5.32	4.43	23.59
Total	83.94			
WT				443.60
	CSI (%)			88.72

Source: Processed Data (2022)

In table 2, it can be seen that the value of *Customer Satisfaction Index* (CSI) on the Indodaily.co website is 88.72%. The value of *Customer Satisfaction Index* (CSI) is obtained by dividing the Total Weighting value with the maximum scale used in the study (maximum scale of 5), then multiplied by 100%. Based on the satisfaction index, *Customer Satisfaction Index* (CSI) of 88.72% is in the range of 0.81-1.00, which means that the satisfaction index of Indodaily.co website visitors is in the "Very Satisfied" criteria.

4.2 Importance Performance Analysis (IPA)

Basically every business has attributes that affect customer satisfaction that need to be improved or maintained. Based on the results of website visitor satisfaction which is still below 100%, the Indodaily.co website still needs to increase the level of customer satisfaction. Consumer satisfaction is obtained from the value of the *Customer Satisfaction Index* (CSI). Increasing customer satisfaction up to 100% can be done by increasing the level of importance and performance. Attributes that must be prioritized are attributes that are very important for consumers, but the level of activity is still considered low by consumers. One way to increase the level of importance and performance is to use the *Importance Performance Analysis* (IPA) method. This method places the priority level of performance for each attribute through a Cartesian diagram which is divided into 4 quadrants, the location of the attributes is obtained from the results of the average value of the level of importance and the level of performance. Viewed from table 3.

Table 3. Average Value of Interest Level and Performance

Code	Attribute	Level of Importance	Level of Performance
P1	Indodaily.co has an attractive and easy-to-use	4.47	4.40
P2	The content on the indodaily.co website varies and fulfills desires and interest of readers	4.41	4.41
P3	The information or news presented is thoroughly peeled	4.35	4.35
P4	indodaily.co provides information/news quickly and accurately	4.32	4.30
P5	The news content on the indodaily.co website is always using two or more sources	4.35	4.44
P6	The indodaily.co website presents news/information that is currently being	4.45	4.45

	discussed by the public		
P7	The indodaily.co editorial team is responsible for misinformation broadcast	4.38	4.38
P8	indodaily.co provides fast (responsive) services to current issues with clear information delivery.	4.38	4.43
P9	The indodaily.co website is responsive when used on desktops, tablets and mobile phones	4.45	4.51
P10	The indodaily.co website is easily accessible even though the internet network is weak	4.40	4.42
P11	The speed of repair of information or news that wrong	4.38	4.43
P12	Giving the right of reply to parties who object to the news/information broadcast	4.39	4.37
P13	Visitors or readers feel safe from malware/viruses when visiting the indodaily.co website	4.40	4.43
P14	Visitors or readers believe that the news/information presented by the indodaily.co website is a fact and the result of direct interviews with informants	4,53	4,54
P15	Visitors feel safe from tapping personal information when visiting the indodaily.co website	4,39	4.45
P16	Readers can easily contact the indodaily.co editorial team to confirm or ask questions related to the news broadcast on the indodaily.co website	4.40	4.42
P17	The indodaily.co editorial team is willing to accept criticism and suggestions from readers	4.53	4.57
P18	News/information on the web the indodaily.co site provides complete and accurate information so that visitors feel commensurate with the cost of internet packages issued with the information obtained	4.44	4.49
P19	Ease of finding the desired news/information category	4.46	4.43
	Average score	4.42	4.44

Source: Processed Data (2022)

In table 3, it can be seen that the average value of importance level is 4.42 and the average value of performance level is 4.44. These two average values become the center line on the Cartesian *Importance Performance Analysis* (IPA) diagram so that the Cartesian diagram is divided into 4 quadrants. Each quadrant describes a different state. The Cartesian *Importance Performance Analysis* (IPA) diagram is shown in Figure 3 below.

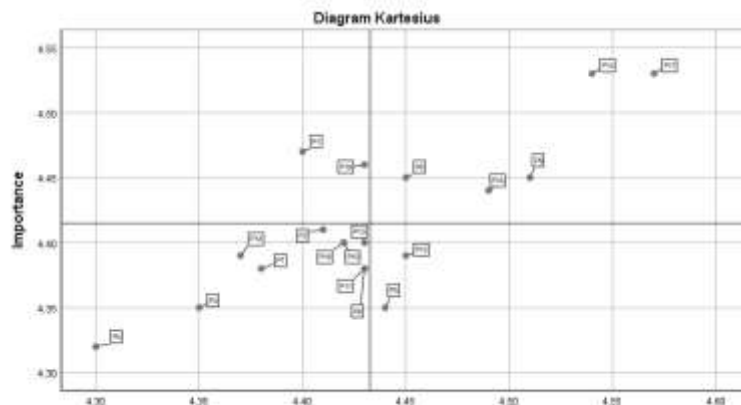


Figure 3. Cartesian Importance Performance Analysis (IPA) Diagram

Figure 3, shows the mapping on the Cartesian diagram based on the level of importance and level of performance that allows the Indodaily.co website to make improvements to attributes that are considered very important by consumers. The following is the result of the mapping of the four quadrants in the Cartesian diagram:

1. Quadrant I

Quadrant I is a high priority quadrant. Attributes in this quadrant are considered important for visitors, but service performance is not as expected by visitors. The attributes included in this quadrant are as follows:

- a. Indodaily.co has an attractive and easy-to-use website display (P1 code)
- b. Ease of finding the desired news/information category (P19 code) These two attributes must be made a top priority for Gojek to improve performance in order to increase the satisfaction of website visitors.

2. Quadrant II

Quadrant II includes attributes that are considered in accordance with visitor expectations on the performance of the Indodaily.co website. The attributes included in this quadrant are as follows:

- a. The indodaily.co website presents news/information that is currently being discussed by the public (code P6)
- b. The indodaily.co website is responsive when used on desktops, tablets and mobile phones (code P9)
- c. Visitors or readers believe that the news/information presented on the indodaily.co website is a fact and the result of direct interviews with sources (code P14)
- d. The indodaily.co editorial team is willing to accept criticism and suggestions from readers (code P17)
- e. News/information on the indodaily.co website provides information complete and accurate so that visitors feel commensurate with the cost of internet packages issued with the information obtained (code P18).

The five attributes in quadrant II above are attributes that must be maintained by the Indodaily.co website due to the performance of the indodaily website. co is in line with user expectations.

3. Quadrant III

Quadrant III is a low priority quadrant. Attributes included in this quadrant are considered less important because their performance is not so good. The attributes included in this quadrant are as follows:

- a. The content on the indodaily.co website varies and fulfills the wishes and interests of readers (code P2).
 - b. The information or news presented is completely peeled off (code P3)
 - c. indodaily.co provides information/news quickly and accurate (code P4)
 - d. The indodaily.co editorial team is responsible for misinformation broadcast (code P7)
 - e. Indodaily.co provides fast (responsive) service to current issues with clear information delivery (code P8)
 - f. The indodaily.co website is light accessed even though the internet network is weak (code P10)
 - g. Speed of correcting incorrect information or news (code P11)
 - h. Giving the right of reply to parties who object to broadcast news/information (code P12)
 - i. Visitors or readers feel safe from malware/viruses when visiting the indodaily website .co (code P13)
 - j. Readers can easily contact the editorial team of indodaily.co to confirm or inquire about news broadcast on the website te indodaily.co (code P16)
4. Quadrant IV
- Quadrant IV includes attributes whose importance is considered low by users but the services provided are already very good. The attributes included in this quadrant are as follows:
- a. News content on the indodaily.co website always uses two or more sources (code P5)
 - b. Visitors feel safe from tapping personal information when visiting the indodaily.co website (code P15)

The two attributes being in quadrant IV is an attribute that has a low level of importance but a high level of performance from the indodaily.co website

IV. Conclusion

Based on the discussion and data processing that has been carried out by researchers, it can be concluded from research conducted in this online media Indodaily.co. are as follows:

1. Based on the results of the calculation of the satisfaction level of visitors using the Customer Satisfaction Index (CSI) method which went through several stages of calculation, the level of visitor satisfaction got a percentage value of 88.72% in the range of 81% - 100% which means, in terms of visitor satisfaction index Indodaily.co website is located at and the "Very Satisfied" criteria.
2. Based on the analysis using the Importance Performance Analysis (IPA) method, there are two service attributes that are included in the main priority. This shows that these attributes are considered underperforming by visitors. This is because these attributes are considered very important, but their implementation is still felt to be lacking by Indodaily.co website visitors. There are five attributes that have good performance according to visitors, so their achievements need to be maintained and even further improved. For the low priority quadrant, there are ten service attributes that fall into this quadrant, this shows that there are still attributes that are not able to provide service satisfaction to visitors. This attribute also does not rule out the possibility to improve its performance so that visitors can be interested and satisfied with the performance of the Indodaily.co website. And there are two (2) service attributes that are considered excessive by visitors to the Indodaily.co website. This means that visitors think these attributes are not too important for visitors, so they need to be considered for reducing their performance.

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