Journal of Artificial Intelligence and Engineering Applications

Website: https://ioinformatic.org/

15th October 2025. Vol. 5. No. 1; e-ISSN: 2808-4519

User Satisfaction Analysis of the Shopee Website's User Interface using the End-User Computing Satisfaction (EUCS) Method (Case Study of Students of STMIK Time Class 21)

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Abstract

Information technology cannot be separated from people's lives and has had a big influence in various fields, including the economic or business sector. One type of application of technological in the economic or business sector is the online trading industry, often called the marketplace. This study aims to analyze the level of user satisfaction towards the Shopee website user interface using the End User Computing Satisfaction (EUCS) method, namely content, accuracy, format, ease of use, and timeliness. Data were collected through an online questionnaire with a total of 100 respondents, namely students of STMIK TIME batch 21. The results of the study are presented in the form of interactive visuals through the website and it is hoped that the findings of this study can provide comprehensive insights into user experience and become a reference for Shopee to continue improving the quality of the Shopee website user interface.

Keywords: *User Satisfaction, End User Computing Satisfaction*

1. Introduction

Indonesia has a large population and internet users, which has the potential to drive the growth of e-commerce in Indonesia. One of the e-commerce in Indonesia is Shopee [1]. Shopee is an online buying and selling platform that provides various products and services to support daily activities. Shopee has a large number of website visits. A website can be defined as a collection of pages that present information in the form of digital data, including images, text, animations, sound, and video, or a combination of these, that can be accessed via an internet connection by anyone worldwide [2]. The rapid and intense growth of e-commerce websites has become the biggest challenge for Shopee's website in winning market competition and attracting customers to make transactions on Shopee. Shopee needs to improve user satisfaction in order to maintain its position in the market because user satisfaction is a key factor that influences the success and survival of a website [3]. Satisfaction is a user's objective assessment of a product or service's features at a pleasant level, whether below or above expectations. The results of user assessments can be a crucial element in developing and striving for improvement. If the user's assessment is above expectations, the user will be positive; otherwise, the user's assessment will tend to be negative [4].

Shopee typically measures user satisfaction using ratings and reviews. These ratings and reviews describe the user's overall experience with Shopee, but not specifically the user interface. The user interface is the communication mechanism between the user and the system in a program, whether it be a website, mobile application, or software.This mechanism is tailored to the user's needs. The scope of the user interface includes elements such as visual appearance, color usage, animations, and how the program interacts with the user [5]. This system can lead to a lack of specific information regarding user satisfaction with the Shopee user interface, where data from user experiences after they use and see the Shopee user interface, whether positive or negative, can help Shopee identify the strengths and weaknesses of the user interface that has been running [6].

From the explanation above, the researcher found a problem that was a deficiency, namely that the rating and review process for Shopee was not specific regarding the user interface, but the ratings and reviews contained everything about Shopee. Based on the ongoing process in the field that uses ratings and reviews that are not yet fully specific, researchers will propose problem solving (solutions) for the current system is by creating a user satisfaction survey website for the Shopee user interface that focuses on increasing the accuracy of user satisfaction analysis by using the end user computing satisfaction (EUCS) method. This method evaluates five indicators of user satisfaction: content, accuracy, format, ease of use, and timeliness [7]. End user computing satisfaction (EUCS) is a method used to measure the level of satisfaction of information system users by comparing their expectations with the actual performance of the system [8]. The results of the user satisfaction analysis of the user interface using the EUCS method are used to recommend improvements to the Shopee user interface.

2. Methodology

The model used in this research is a use case diagram as shown in the image below, namely:

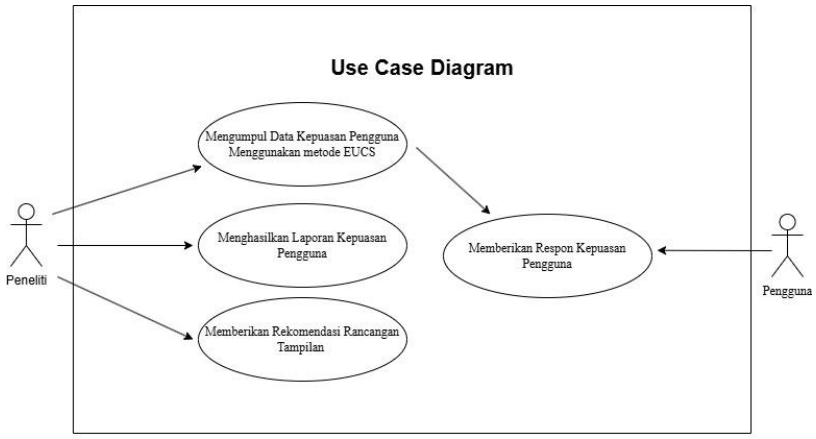

Fig. 1: Use Case Diagram

Next, create a scenario (flow of events) from the Use Case Diagram, namely:

Table 1: Definition of Actor

No	Actor	Description
1	Researcher	The actor who is the researcher of the user satisfaction data that has been collected
2	User	Actors who are also known as customers or users who use Shopee

Table 2: Use Case Scenario: Performing Data Entry

Identification	
Number	1
Name	Fill out the questionnaire
Goal	Providing an assessment regarding user satisfaction with the Shopee user interface
Actor	User
Actor's Action	**System Reaction**
1. Enter personal data first such as name and email 2. Fill out the questionnaire provided 3. Press the finish or send button	
	4. The system will save the submitted data

Table 3: Use Case Scenario: Performing Data Processing

Identification	
Number	2
Name	Processing questionnaire data
Goal	Making additions, changes and deletions to questionnaire data
Actor	Researcher
Actor's Action	**System Reaction**
1. Open the questionnaire data manager view by pressing the questionnaire results.	
	2. The system will display the results of the data that has been filled in by the user.

Preparation and Distribution of The Questionnaire Using EUCS Method, namely:

Table 4: Questionnaire Arrangement

Indikator	Pernyataan	
content	C1	Isis Interface website shopee yang disediakan mudah dipahami.
	C2	isi interface website shopee sesuai dengan kebutuhan pengguna.
	C3	Isi tata letak user interface bagus dan fungsional.
	C4	Instruksi dan label pada interface website shopee yang disajikan mudah diikuti.
accuracy	A1	interface website shopee menyajikan informasi yang akurat.
	A2	Petunjuk dan info yang diberikan user interface website shopee sangat jelas.
	A3	Gambar dan ikon yang digunakan jelas dan mudah dipahami
	A4	Desain dan tampilan user interface konsisten diseluruh aplikasi.
format	F1	Interface website shopee menampilkan desain layout yang menarik dan modern.

	F2	Ukuran font dan warna yang digunakan mudah dibaca.
	F3	Interface website shopee memiliki tema dan komposisi warna yang menarik.
	F4	shopee memberikan tombol tombol yang sesuai dengan kebutuhan pengguna.
Ease of use	E1	Tidak membutuhkan waktu yang lama untuk memahami user interface website shopee.
	E2	Navigasi pada user interface shopee mudah digunakan dan intuitif.
	E3	Pengguna mudah menemukan informasi yang dibutuhkan.
	E4	Pengguna dapat dengan mudah melakukan aksi yang diinginkan.
Timeliness	T1	Response time dalam menampilkan beranda sangat cepat.
	T2	Shopee memproses informasi secara realtime dan cepat.
	T3	Customer service cepat dan sigap dalam menangani komplain.
	T4	Interface website shopee dapat beradaptasi dengan berbagai ukuran layar dan perangkat dengan sangat baik.

3. Result And Discussion

The results of this research are the development of a website to analyze user satisfaction with the Shopee website's user interface. This website uses the EUCS method to visualize the results of the trials. The following are some of the interfaces display used by respondents, which contain a form for completing a questionnaire**.**

1. Initial View Of User Satisfaction Survey Used By Respondents
   The initial display of a form containing the title of the survey and a brief summary about Shopee.

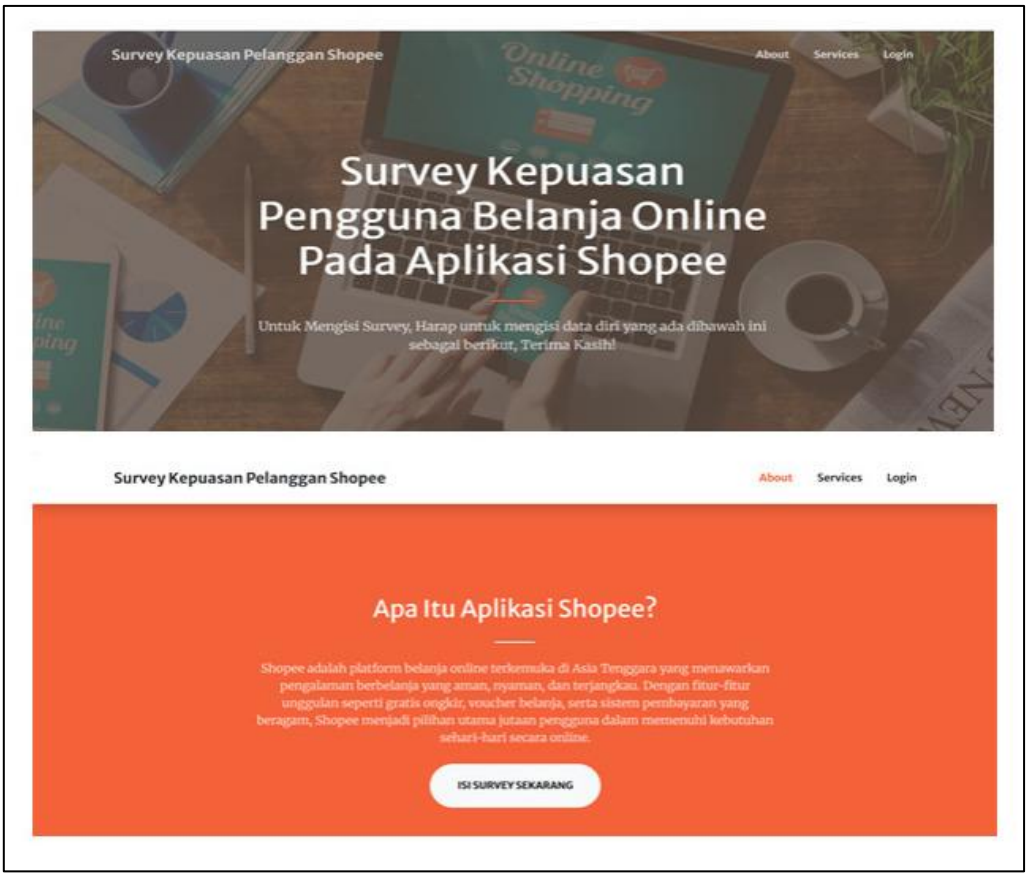

fig 2. Initial View Of User Satisfaction Survey Used By Respondents

2. Display Of The User Satisfaction Survey Personal Data Form Used By Respondents
   Next, a form appears, containing a place to enter user data, such as name, age, and email address. After completing the data, the user will complete a questionnaire based on their experience.

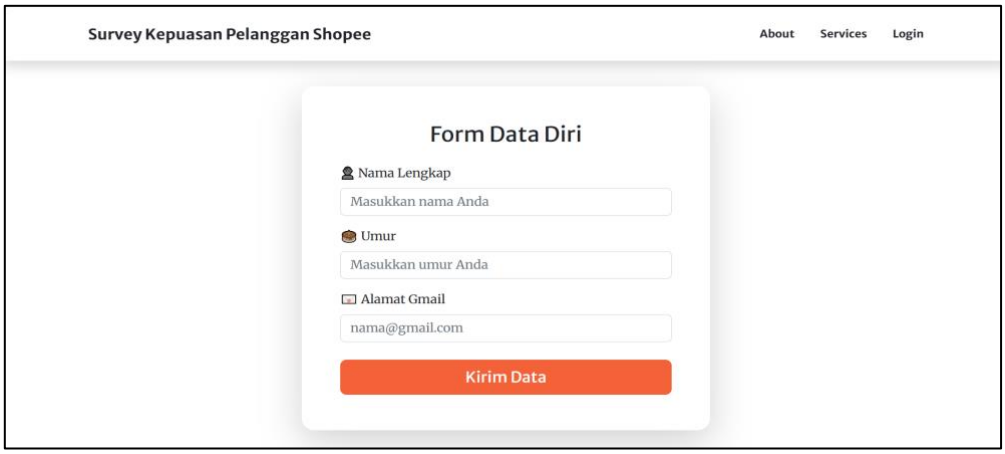

fig 3. Display Of The User Satisfaction Survey Personal Data Form Used By Respondents

3. View Of The User Satisfaction Survey Questionnaire Used by Respondents
The questionnaire display is presented with various data presentation models, starting from statements and responses that will answer their experience with the Shopee website user interface.

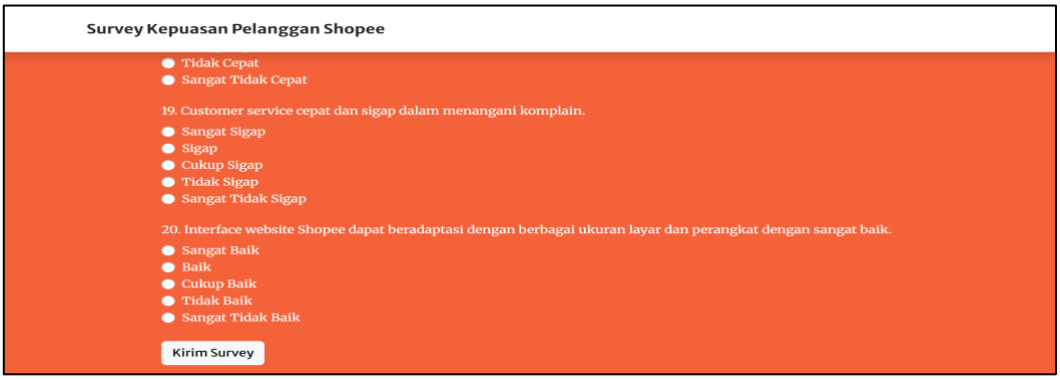

Fig 4. View Of The User Satisfaction Survey Questionnaire Used by Respondents

The following are several user interface displays used by users or researchers, which contain the results of respondents filling out the questionnaire.

1. Admin login view used by user or researches
The following is the login form for the admin, for the user and password it will be connected to phpmyadmin, after the user successfully logs in it will be directed to a special page for the admin.

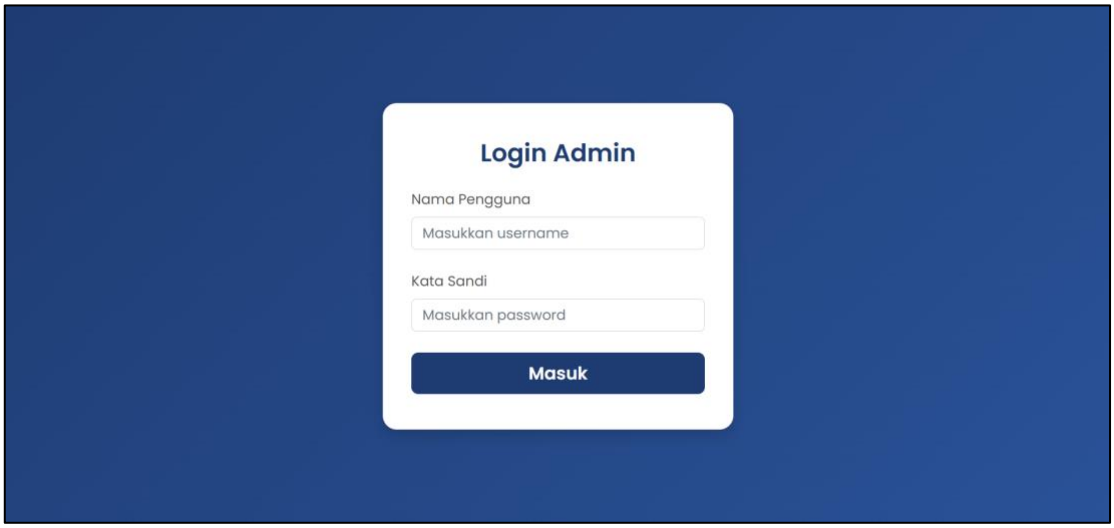

fig 5. Admin Login View Used By User Or Researchers.

2. Display Of Survey Data Results Used By User Or Researchers
After the admin has successfully logged in, it will be directed to this page. The admin display contains survey results data.

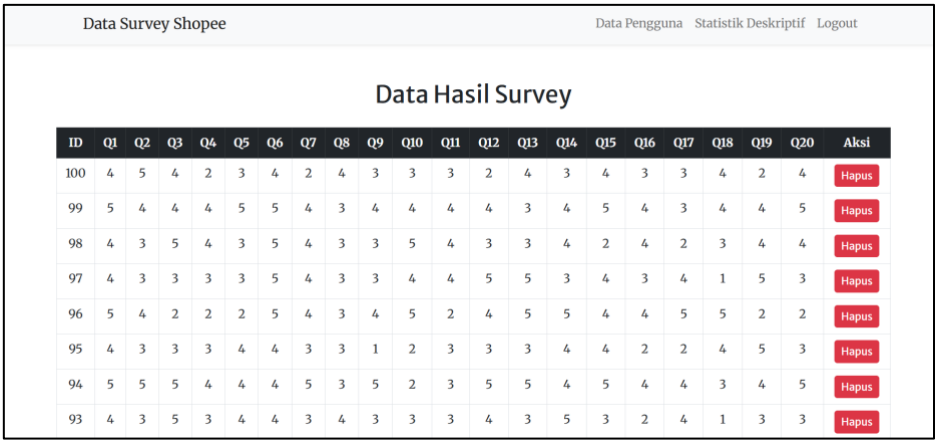

fig 6. Display Of Survey Data Results Used By User Or Researchers

3. User Data List View Used By User Or Researchers
After the admin has successfully logged in, it will be directed to this page. The admin display contains user data list.

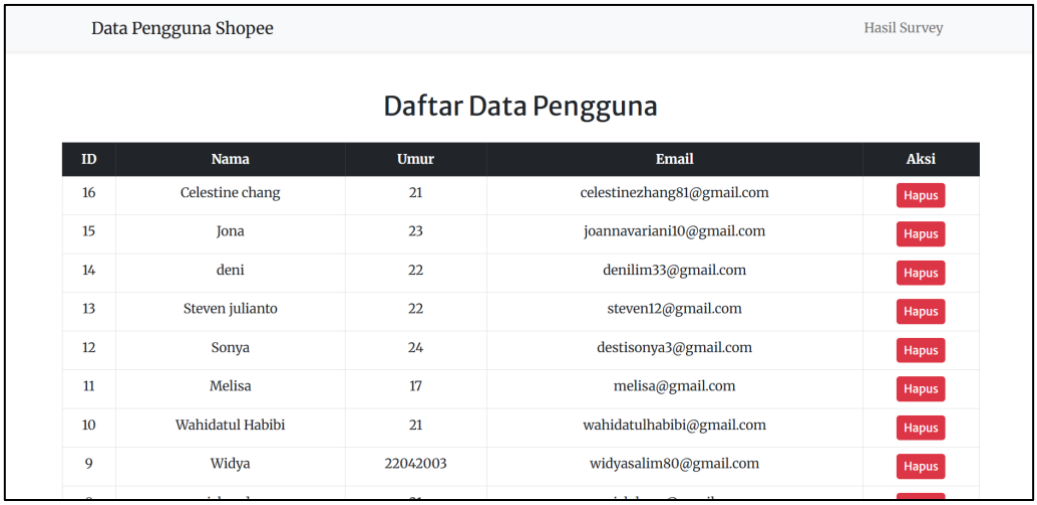

fig 7. User Data List View Used By User Or Researchers

4. Descriptive Statistics Data Display Used By User Or Researchers
After the admin has successfully logged in, it will be directed to this page. The admin display contains Descriptive Statistics Data.

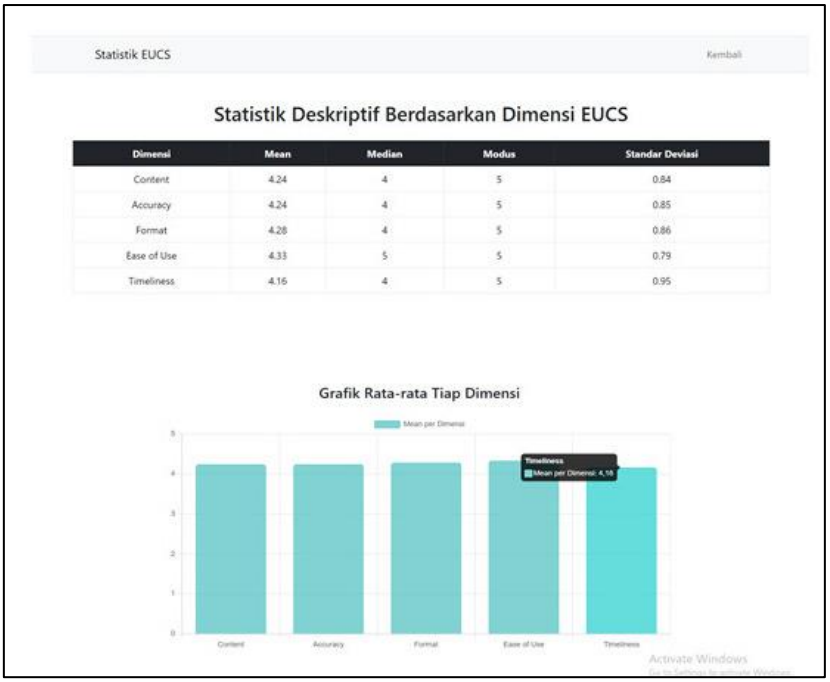

fig 8. Descriptive Statistics Data Display Used By User Or Researchers

The data analysis method used in this study is descriptive statistics. The results of the analysis are shown in Table 4.

Table 4. Descriptive Statistical Data Results

Indikator	Rata-rata
Content	4.24
Accuracy	4.24
Format	4.28
Ease of use	4.33
Timeliness	4.16

This study builds a website-based survey system used to measure the level of user satisfaction with the Shopee website user interface using the End User Computing Satisfaction (EUCS) method, namely Content, Accuracy, Format, Ease of Use, and Timeliness. Based on the results of descriptive statistics, the Ease of use indicator obtained the highest average value of 4.33 and the lowest was in the timeliness indicator with a score of 4.16. Other indicators such as content with a score of 4.24, accuracy with a score of 4.24, and format with a score of 4.28. All values above indicate that users feel very satisfied with the Shopee website user interface.

After analyzing, designing, and creating the proposed system, the author found that the proposed system has advantages and disadvantages. The advantages and disadvantages of the proposed system are as follows.

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There are several advantages of the proposal system, including:
1. All survey questions will use a Likert scale to assess respondents' responses. The Likert scale is used to measure respondents' attitudes, opinions, and perceptions of a given phenomenon by responding to five alternatives for each statement. This allows survey users to avoid neutral options, providing more explicit feedback.
2. Comparison of previous rating and review systems that contain information about user experiences with Shopee as a whole but not specifically about the user interface, this proposed system can provide specific user experience information about the user interface so that it can help Shopee identify the strengths and weaknesses of the user interface that is running.
3. The website is designed using responsive web technology, adapting to various devices, including desktops and smartphones. This allows users to complete surveys from anywhere as long as they have an internet connection.
4. The proposed system can automatically process incoming data with descriptive statistical calculations such as mean, median, mode, standard deviation and the data results can be viewed directly by the admin in the form of tables and graphs, thus simplifying the process of interpreting the results.

There are several shortcomings of the proposed system, including:
1. The proposed system does not yet provide a feature to export survey data results directly to Excel, this can slow down the admin in interpreting survey data results quickly.
2. The system may be difficult to reach for those without internet access, especially if used in remote areas.
3. The proposed system does not yet have a warning feature that requires respondents to fill in questions, so there is a possibility that respondents will miss questions.

4. Conclusion

Based on the results of research and development of the Shopee website user interface user satisfaction survey information system using the End User Computing Satisfaction (EUCS) method, the following conclusions can be drawn:
1. This study builds a website-based survey system used to measure the level of user satisfaction with the Shopee website user interface using the End User Computing Satisfaction (EUCS) method, namely Content, Accuracy, Format, Ease of Use, and Timeliness. Based on the results of descriptive statistics, the Ease of use indicator obtained the highest average value of 4.33 and the lowest was in the timeliness indicator with a score of 4.16. Other indicators such as content with a score of 4.24, accuracy with a score of 4.24, and format with a score of 4.28. All values above indicate that users feel very satisfied with the Shopee website user interface.
2. This system is designed to support and simplify the evaluation process for analyzing user satisfaction levels with the Shopee website user interface using the End User Computing Satisfaction (EUCS) method. All data collected using the End User Computing Satisfaction (EUCS) method will be automatically stored and displayed on the admin page, complete with statistical data processing features, so that the analysis of survey results becomes more efficient and systematic.

References

[1] B. P. Statistik, "Jumlah Penduduk Pertengahan Tahun (Ribu Jiwa), 2022-2024," 2024. https://www.bps.go.id/id/statistics-table/2/MTk3NSMy/jumlah-penduduk-pertengahan-tahun--ribu-jiwa-.html
[2] R. Abdulloh, *7 Materi Pemrogaman Web Untuk Pemula*. Jakarta: Pt Elex Media Komputindo, 2022.
[3] N. A. O. Saputri and A. Alvin, "Measurement of User Satisfaction Level in the Bina Darma Information Systems Study Program Portal Using End User Computing Satisfaction Method," *J. Inf. Syst. Informatics*, vol. 2, no. 1, pp. 154–162, 2020, doi: 10.33557/journalisi.v2i1.43.
[4] F. A. S. Samapta, "Pengaruh User Interface (Ui) Terhadap Kepuasan Dan Keputusan Pembelian Konsumen Pada Aplikasi Shopee," p. 63, 2023.
[5] H. Himawan and M. Yanu, *Interface User Experience*. Lembaga Penelitian dan Pengabdian kepada Masyarakat UPN Veteran Yogyakarta, 2020.
[6] D. Daryanto, *Konsumen Dan Pelayanan Prima*. Yogyakarta: Penerbit Gava Media, 2021.
[7] M. F. Azzumar, *ANALISIS KEPUASAN PENGGUNA TERHADAP APLIKASI MOBILE TIKET.COM MENGGUNAKAN METODE END USER COMPUTING SATISFACTION (EUCS) YANG DIKEMBANGKAN*, vol. 9. 2022.
[8] P. S. Lestari, *ANALISIS KEPUASAN PENGGUNA LAYANAN SISTEM HELPDESK UNIVERSITAS JAMBI MENGGUNAKAN METODE END USER COMPUTING SATISFACTION (EUCS)*. 2023. [Online]. Available: https://repository.unja.ac.id/57870/6/SKRIPSI FULL.pdf