JURTEKSI (Jurnal Teknologi dan Sistem Informasi ISSN 2407-1811 (Print)
Vol. X No 3, Juni 2024, hlm. 537 – 544 ISSN 2550- 020 (Online)
DOI: http://dx.doi.org/10.33330/jurteksi.v10i3.3256
Available online at http://jurnal.stmikroyal.ac.id/index.php/jurteksi

APPLICATION OF WEBQUAL AND END-USER COMPUTING SATISFACTION (EUCS) IN ANALYZING INFORMATION CONTENT MEASUREMENT

Agus Suryadi[1], Eka Lia Febrianti[2*], Alex Sandri Sikumbang[1]
[1]Informatics Engineering, Ibnu Sina University
[2]Software Engineering, Universal University
email: *agussuryadi@uis.ac.id

Abstract: Information content that meets user needs is an important aspect of a website. Quality testing, especially for sites that have never been tested, is necessary to ensure effectiveness. This research uses observation techniques, questionnaires, and literature studies related to the Webqual method and the End-User Computing Satisfaction (EUCS) variable. The variables used include Usability, Information Quality, Service Interaction Quality, User Satisfaction, and Content. The Webqual model is applied in this research through a questionnaire, which produces various data from respondents. The data is then processed and analyzed to produce accurate statistical data. From this research, the results of the questionnaire show that Service Interaction Quality has a low percentage, namely 72.72% (X3.2), where the full percentage is 100%. Apart from that, User Satisfaction also has a low percentage, namely 70.90% (Y.1). This shows that the Quality of Service Interaction has less than a positive effect on User Satisfaction. Therefore, improvements are needed in the Quality of Service Interaction section on the PT Yudo Indonesia website so that User Satisfaction also increases, especially in the aspects of security and meeting user needs.

Keywords: EUCS; website quality; webqual

Abstrak: Konten informasi yang memenuhi kebutuhan pengguna adalah aspek penting dari sebuah situs web. Uji kualitas, terutama untuk situs yang belum pernah diuji, diperlukan untuk memastikan efektivitasnya. Penelitian ini menggunakan teknik observasi, kuesioner, dan studi literatur terkait metode Webqual dan variabel End-User Computing Satisfaction (EUCS). Variabel yang digunakan antara lain Usability (Kualitas Kegunaan), Information Quality (Kualitas Informasi), Service Interaction Quality (Kualitas Interaksi Layanan), User Satisfaction (Kepuasan Pengguna), dan Content (Konten). Model Webqual diterapkan dalam penelitian ini melalui kuesioner, yang menghasilkan berbagai data dari responden. Data tersebut kemudian diolah dan dianalisis untuk menghasilkan data statistik yang akurat. Dari penelitian ini, hasil kuesioner menunjukkan bahwa Service Interaction Quality (Kualitas Interaksi Layanan) memiliki persentase yang rendah, yaitu 72,72% (X3.2), di mana persentase penuhnya adalah 100%. Selain itu, User Satisfaction (Kepuasan Pengguna) juga memiliki persentase rendah, yaitu 70,90% (Y.1). Hal ini menunjukkan bahwa Kualitas Interaksi Layanan kurang berpengaruh positif terhadap Kepuasan Pengguna. Oleh karena itu, diperlukan peningkatan pada bagian Kualitas Interaksi Layanan di situs web PT Yudo Indonesia agar Kepuasan Pengguna juga meningkat, terutama pada aspek keamanan dan pemenuhan kebutuhan pengguna.

Kata kunci: EUCS; kualitas website; webqual

INTRODUCTION

PT Yudo Indonesia, a company operating in the machinery sector, opens up internship opportunities for students. The internship process begins with an introductory letter from the university and

JURTEKSI (Jurnal Teknologi dan Sistem Informasi ISSN 2407-1811 (Print)
Vol. X No 3, Juni 2024, hlm. 537 – 544 ISSN 2550- 020 (Online)
DOI: http://dx.doi.org/10.33330/jurteksi.v10i3.3256
Available online at http://jurnal.stmikroyal.ac.id/index.php/jurteksi

strict selection by the General Manager based on predetermined criteria. In this modern era, rapid technological developments bring great benefits to society, including easy access to information via the internet. Internet users can access various needs and knowledge easily, including information related to internships. The internet is not only used for work and education, but also to reach a global audience. One of the effective internet media is websites [1]. The website itself is a form of mass media that is published via the internet network and can be accessed anywhere and at any time [2]. Many companies, agencies and organizations use websites to build their identity and be accessed by internet users. This website page presents various information such as company profiles, job vacancies and internship programs. This website is useful for companies to promote themselves and recruit prospective apprentices, as well as for prospective apprentices to get the information they need before registering. This company operates in the field of buying and selling industrial machines and workshop services, achieving resoun ding success thanks to the use of internet technology. The internet platform, especially the website, has proven to be the main key to boosting company sales with a contribution of almost 50% and is designed with a wide reach, reaching all regions of Indonesia, making it easier for consumers wherever they are to access information and carry out transactions[3][4]

As for several previous studies that were used as literature review material, the research was carried out by evaluating the quality of websites from the aspects of usability, information quality, and interaction quality using the Webqual 4.0 method [5] and the level of user satisfaction with the current quality of website services. Next, the researcher made tabulations and statistical analysis of the data that had been collected, carried out validity and reliability tests on the measuring instruments and then carried out multiple linear regression analysis. The data collection process carried out in this research was by distributing questionnaires indirectly to respondents[6]. This combined technique can be carried out in relation to the depth and breadth of information, response level from respondents and data quality, as well as efficiency and effectiveness in collecting data from November 2023 to January which was filled in by 66 respondents with the criteria of gender, age, last education, visits. Then a descriptive analysis is carried out to see characteristics such as the average (mean) of a group of data. To carry out descriptive analysis, you can use the IBM SPSS 20 Statistics application. Next, validity and reliability tests are carried out to produce results regarding usability quality, information quality, service interaction quality and content [7]

To continue to boost sales, the company implements targeted promoti onal strategies and direct machine demos to potential customers. This strategy has proven effective in increasing consumer confidence and purchasing interest. This company's success in utilizing internet technology should be an inspiration for other companies[8]. With the right strategy and optimal use of technology, companies can increase their competitiveness and achieve brilliant success, so it would be very scary if the appearance of the main website is not updated both in terms of service and quality. website appearance, both in terms of design and layout[9].

WebQual 4.0 uses related to website design, for example appearance, ease of use, navigation and also the appearance

JURTEKSI (Jurnal Teknologi dan Sistem Informasi ISSN 2407-1811 (Print)
Vol. X No 3, Juni 2024, hlm. 537 – 544 ISSN 2550- 020 (Online)
DOI: http://dx.doi.org/10.33330/jurteksi.v10i3.3256
Available online at http://jurnal.stmikroyal.ac.id/index.php/jurteksi

presented on the website. [10]. The Webqual 4.0 tool presents an evaluation tool consisting of four main parameters, namely Usability, Information Quality, Service Interaction Quality, and Overall, to measure the quality of a website [11]. Pengukuran kualitas yang dihasilkan oleh Webqual 4.0 is expected to provide an accurate picture of satisfaction [12] users of the evaluated website [13]. Thus, it is hoped that the results of this measurement can provide valuable input for further development strategies aimed at improving website quality. It is hoped that this website will be able to become an information medium for customers to find out more in more detail and detail. By analyzing and measuring the information content on the website, it is hoped that it will make it easier for company customers to access more and complete information than the main information on the website.

METHOD

This study population was selected based on popularity and preferences across generations. Based on the SameWeb report, visits to www.yudo.co.id reached 49.79 million during November 2023 to January 2024. Researchers used a purposive sampling technique for the first stage, selecting respondents who had experience using the PT Yudo Indonesia website. The second stage uses the Accidental Sampling technique, selecting respondents by chance. With a large population and limited time and costs, the minimum sample size was set at 100 people, according to theory which states that SEM requires 100-200 samples or 10 times the number of variable paths in the PLS-SEM model.

This research instrument uses a questionnaire consisting of two parts. The first section includes 6 respondent profile questions: name, gender, education, age, and two questions related to user experience. The second part contains 20 research questions: 12 from the Webqual 4.0 model (3 variables), 4 from the EUCS model (1 variable), and 4 about User Satisfaction. The Likert scale used is 5 points, from strongly disagree (1) to strongly agree (5). Validity and reliability are guaranteed by adopting indicators from Webqual 4.0 and EUCS.

Overall, this research adopts a quantitative approach which aims to assess the level of user satisfaction with the PT Yudo In-donesia website using Webqual 4.0 and to identify the factors that influence it. [14]. Data was collected through a survey using a questionnaire, and statistical analysis was carried out using relevant software. To measure the quality of the PT Yudo In-donesia website, three Webqual 4.0 variables (Usability quality, Information Quality, and Service Interaction quality) are used, along with one variable from EUCS (content) [15][16].

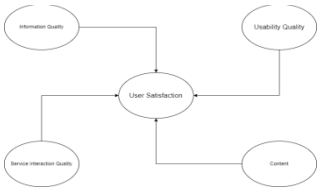

Figure 1. Information Content Testing Model Using the Webqual Method

Webqual 4.0 was prepared based on research on four dimensions, namely [17]: (1) Quality of usability (Usability from human computer interaction)., (2) Quality of information from information systems research (Information Quality)., (3) Interaction quality and service quality from information system quality research (Service Interaction Quality).,(4) Overall

JURTEKSI (Jurnal Teknologi dan Sistem Informasi ISSN 2407-1811 (Print)
Vol. X No 3, Juni 2024, hlm. 537 – 544 ISSN 2550- 020 (Online)
DOI: http://dx.doi.org/10.33330/jurteksi.v10i3.3256
Available online at http://jurnal.stmikroyal.ac.id/index.php/jurteksi

quality (Overall impression) Research the quality of all the three qualities above.

This research uses the Webqual 4.0 method, where the variables Usability, Information Quality, and Interaction Quality act as independent variables. Meanwhile, the Overall variable in this context is interpreted as an overall picture of User Satisfaction, and acts as a dependent variable [18].

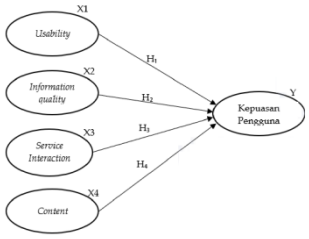

Figure 2. Model WebQual 4.0

RESULT AND DISCUSSION

Process Analysis

Analisis Deskriptif Variabel Usability (X1)

The Usability variable has an average rating of 5.36, which shows that respondents quite agree with the statements in the questionnaire related to Usability and Site Design. The average for each statement can be seen in Table 1.

Table 1. Description of Usability

Items	Scale (%)							Mean
	1	2	3	4	5	6	7	
The website is easy to learn	2	0	2	6	22	60	8	5,58
Easy and clear interaction	2	0	2	10	24	52	10	5,50
Website is easy to navigate	2	0	2	6	30	48	12	5,54
Website is easy to use	0	0	6	10	16	52	16	5,62
The appearance of the website is attractive	2	2	14	24	24	34	0	4,68
Website appearance according to type	0	2	0	20	26	42	10	5,36
Contains competence	0	0	8	12	28	48	4	5,28
The website gives a positive impression	0	2	2	12	30	50	4	5,36

Source: Primary data (processed)

The usability item which has the highest average of 5.58 is the ease of learning yudo.co.id. Meanwhile, the lowest average of 4.68 was the appearance of yudo.co.id. Therefore, to improve the quality of usability, website managers can improve the quality of the appearance or design of yudo.co.id to make users more interested.

Descriptive Analysis of Information Quality Variables (X2)

The Information Quality variable has an average rating of 5.26, which indicates that respondents quite agree with the statements in the questionnaire related to information quality. The average for each statement can be seen in Table 2.

Table 2. Description of Information Quality

Items	Scale (%)							Mean
	1	2	3	4	5	6	7	
Accurate information	0	0	6	20	34	28	2	5,10
Information can be trusted	0	0	4	26	34	20	6	5,08
Up-to-date information	0	0	2	28	26	42	2	5,14
Relevant information	0	0	0	14	26	44	16	5,62
Information is easy to understand	0	2	4	0	28	54	12	5,64
Complete information	0	0	10	18	30	38	4	5,08
Information is neatly arranged	0	2	8	14	30	38	8	5,18

Source: Primary data (processed)

The Information Quality item which has the highest average of 5.64 is the ease with which respondents understand the information provided by yudo.co.id. Meanwhile, the lowest average of 5.08 is regarding the completeness and correctness of information.

Descriptive Analysis of Service Interaction Variables (X3)

The Service Interaction variable has an average rating of 5.15, which indicates that respondents quite agree with the statements in the questionnaire related to Trust and Empathy. The average for each

JURTEKSI (Jurnal Teknologi dan Sistem Informasi ISSN 2407-1811 (Print)
Vol. X No 3, Juni 2024, hlm. 537 – 544 ISSN 2550- 020 (Online)
DOI: http://dx.doi.org/10.33330/jurteksi.v10i3.3256
Available online at http://jurnal.stmikroyal.ac.id/index.php/jurteksi

statement can be seen in Table 3.

Table 3. Description of Service

Items	Scale (%)							Mean
	1	2	3	4	5	6	7	
Good reputation	0	0	2	24	24	48	2	5,24
Personalization	0	0	4	8	36	48	4	5,40
Interaction between users	6	2	12	14	26	30	10	4,82
Interaction with managers	2	2	6	14	28	44	4	5,12

Source: Primary data (processed)

The Service Interaction item which has the highest average of 5.40 is the personalization provided by yudo.co.id. Respondents felt they could filter or select only the information they needed. Meanwhile, the lowest average of 4.82 is regarding interactions with fellow users. The yudo.co.id site provides interaction features between users such as providing a social media frame for Facebook, YouTube and Google Maps.

Descriptive Analysis of Web User Satisfaction (Y) Variables

The Web User Satisfaction variable has an average rating of 5.74, which indicates that respondents agree with the statement in the questionnaire related to yudo.co.id user satisfaction. The average for each statement can be seen in Table 4.

Table 4. Description of Web User Satisfaction

Items	Scale (%)							Mean
	1	2	3	4	5	6	7	
Download time	0	0	2	6	26	32	32	5,80
Visit the website again	0	0	0	12	18	48	22	5,80
Recommend website	0	0	4	16	28	40	12	5,40
Accessible 24 hours	0	0	0	12	14	40	34	5,96

Source: Primary data (processed)

Table 4, the Web User Satisfaction item with the highest average of 5.80 is the time needed to first access yudo.co.id, with respondents noting it took no more than 15 seconds. Additionally, respondents were willing to revisit the site for health service information. The lowest average, 5.40, was respondents' willingness to recommend yudo.co.id to others needing health service information.

Reliability Testing

Usability Instrument Reliability Test

There are eight items or instruments in the Usability variable. Each item is tested for reliability. The results of the reliability test of the Usability instrument can be seen in Table 5.

Table 5. Reliability Test Results Usability Instrument

Cronbach's Alpha	N of Items
,827	8

Reliability Test of the Information Quality Instrument

There are seven items or instruments in the Information Quality variable. Each item is tested for reliability. The results of the Information Quality instrument reliability test can be seen in Table 6.

Table 6. Reliability Test Results of the Information Quality Instrument

Cronbach's Alpha	N of Items
,846	7

Reliability Test of the Service Interaction Instrument

There are four items or instruments in the Service Interaction variable. Each item is tested for reliability. The results of the reliability test of the Service Interaction instrument can be seen in Table 7.

Table 7. Service Interaction Instrument Reliability Test Results

Cronbach's Alpha	N of Items
,709	4

Reliability Test of the Web User Satisfaction instrument

There are four items or instruments in the Web User Satisfaction variable. Each item is tested for reliability. The reliabil-

JURTEKSI (Jurnal Teknologi dan Sistem Informasi ISSN 2407-1811 (Print)
Vol. X No 3, Juni 2024, hlm. 537 – 544 ISSN 2550- 020 (Online)
DOI: http://dx.doi.org/10.33330/jurteksi.v10i3.3256
Available online at http://jurnal.stmikroyal.ac.id/index.php/jurteksi

ity test results of the Web User Satisfaction instrument can be seen in Table 8.

Table 8. Reliability Test Results of the Web User Satisfaction Instrument

Cronbach's Alpha	N of Items
,759	4

Regression Assumption Test Results

Normality Test Results

Using a regression model for forecasting will produce errors or residues, namely the difference between actual data and forecast data. The remaining residues should have a normal distribution. To see whether the residual data is normally distributed, you can use the Normal Probability Plot (P-Plot) diagram as in Figure 3.

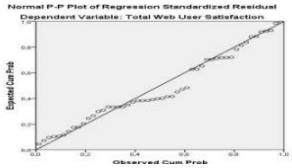

Figure 3. Normality Test Results

Linearity Test Results

Linearity can be tested using a Scatter Plot diagram. This assumption states that the relationship between a dependent variable and an independent variable should be linear, either positive or negative. The linearity assumption is met if the relationship between the independent variable and the dependent variable in the Scatter Plot does not form a particular pattern, such as pa-rabola or exponential.

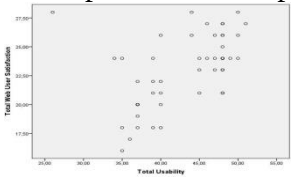

Figure 4. Linearity Test Results of the Relationship between Usability

Multicollinearity Test Results

The multicollinearity test is used to see whether the independent variables are related to each other. A good multiple regression model is if the independent variables are not related to each other. In this research, the variables Usability, Information Quality, and Service Interaction should not be related to each other.

Table 9. Multicollinearity Test Results

Model	Dimension	*Eigenvalue*	*Condition Index*	Variance Proportions			
				(Constant)	Total *Usability*	Total *Information Quality*	Total *Service Interaction*
1	1	3,971	1,000	,00	,00	,00	,00
	2	,014	17,143	,43	,01	,00	,63
	3	,008	22,160	,00	,56	,74	,02
	4	,008	22,618	,57	,43	,26	,35

Heteroscedacity Test Results

The multiple linear regression model is free from elements of heteroscedasticity if the data distribution in the scatter diagram does not show a certain pattern, such as increasing to the top right, decreasing to the bottom left, or other certain patterns.

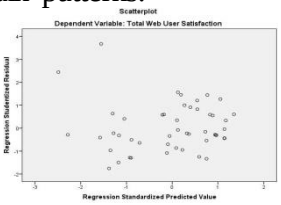

Figure 5. Heteroscedacity Test Results

Figure 5 shows that the data distribution does not form a particular pattern. Therefore, the multiple linear regression model used in this study is free from elements of heteroscedasticity.

CONCLUSION

Based on the results of the website quality evaluation regarding user satisfaction conducted in this study, the conclusions are as follows 1) Usability (X1): Positively influences user satisfaction. All sub-variables of X1 (X1.1, X1.2, X1.3, and X1.4) received "Agree" re-

sponses from the majority of respondents, with the highest score on sub-variable X1.1 at 52.7%; 2) Information Quality (X2): Positively influences user satisfaction. All sub-variables of X2 (X2.1, X2.2, X2.3, and X2.4) received "Agree" responses from the majority of respondents, with the highest score on sub-variable X2.1 at 49.2%; 3) Service Interaction Quality (X3): Less positively influences user satisfaction compared to other Webqual variables. Only sub-variable X3.2 received "Neutral" responses from the majority of respondents at 40.9%, while other sub-variables (X3.1 and X3.3) received "Agree" responses with an average of 38.15%; 4) Content (X4): Positively influences user satisfaction. All sub-variables of X4 (X4.1, X4.2, X4.3, and X4.4) received "Agree" responses from the majority of respondents, with the highest equal score on sub-variables X4.1 and X4.4 at 50%.

BIBLIOGRAPHY

[1] N. Dalimunthe, A. Adawiyah, and T. Karina, "Analisa Kualitas Website Menggunakan Metode Webqual 4.0, *J. Ilm. Rekayasa dan Manaj. Sist. Inf.*, vol. 5, no. 2, p. 184, 2019.

[2] P. Palipi, E. Rajaguguk, M. Aritonang, M. Yohanna, and Y. Y. Rumapea, "Pengukuran Kualitas Layanan Website Dengan Metode Webqual" *Methosisfo J. Ilm. Sist. Inf.*, vol. 2, no. 2, pp. 60–70, 2022.

[3] M. Fauzi and U. L. Yuhana, "Hybrid Analysis of Marriage Information System Using Webqual 4.0, EUCS, and Importance-Performance Matrix Method," *IPTEK J. Technol. Sci.*, vol. 33, no. 3, p. 140, 2022.

[4] A. Prasetya and D. A. Efrilianda, "Analysis and Quality Measurement of SITEDI Sub-System Against User Satisfaction Using WebQual 4 . 0 and EUCS Methods," vol. 5, no. October, pp. 153–167, 2023.

[5] W. Warjiyono and C. M. Hellyana, "Pengukuran Kualitas Website Pemerintah Desa Jagalempeni Menggunakan Metode Webqual 4.0," *J. Teknol. Inf. dan Ilmu Komput.*, vol. 5, no. 2, pp. 139–146, 2018.

[6] I. Sanjaya, "Pengukuran Kualitas Layanan Website Kementerian Kominfo Dengan Menggunakan Metode Webqual 4.0 Ministry of Communication and Information Website Quality Measurement Based on Webqual 4.0 Method," *J. Penelit. IPTEK-KOM*, vol. 14, no. 1, pp. 1–14, 2012.

[7] M. Permata Putri, Herawati, and I. Permata Sari, "Analisis Kualitas Website Gtass Menggunakan Metode Webqual 4.0Modifikasi," *J. Inf. Technol. Comput. Sci.*, vol. 6, no. 2, pp. 99–108, 2019.

[8] R. Sistem, M. System, U. Scale, and W. Method, "JURNAL RESTI Analysis of the SaintekMu Website Quality on User Satisfaction Using the," vol. 5, no. 158, pp. 1319–1331, 2023.

[9] S. Nawangsari, R. K. Harahap, N. Herlina, and E. Ekowati, "Testing and Analysis User Satisfaction of Salute Bidan Application Using End-User Computing Satisfaction," *J. Syst. Manag. Sci.*, vol. 13, no. 5, pp. 457–469, 2023.

[10] A. Jefri, B. Purnama, and H. Mulyono, "Analisis Kualitas Layanan Website SMA Terhadap Kepuasan Siswa Menggunakan

Metode Webqual 4.0," *TIN Terap. Inform. Nusant.*, vol. 4, no. 9, pp. 596–606, 2024.

[11] A. E. Prasetiyanto, "Analisis Penerimaan Sistem Informasi Penugasan Berbasis E-Learning Moodle Menggunakan Metode WebQual 4.0 Dan EUCS Di SMKN 1 Ngasem," *Semin. Nas. Inov. Teknol.*, vol. 5, pp. 047–052, 2021.

[12] A. Saputra and D. Kurniadi, "Analisis Kepuasan Pengguna Sistem Informasi E-Campus Di Iain Bukittinggi Menggunakan Metode Eucs," *Voteteknika (Vocational Tek. Elektron. dan Inform.*, vol. 7, no. 3, p. 58, 2019.

[13] T. Husain and A. Budiyantara, "Analisis EUCS dan WebQual 4.0 Terhadap Kepuasan Pengguna," *JATISI (Jurnal Tek. Inform. dan Sist. Informasi)*, vol. 4, no. 2, pp. 164–176, 2018.

[14] L. Darwati, "Analisis Tingkat Kepuasan Pengguna Aplikasi WETV Menggunakan Metode End User Computing Satisfaction (EUCS)," *J. Ilm. Komputasi*, vol. 21, no. 4, pp. 34–42, 2022.

[15] rezki dwy putra, "analisis kepuasan pengguna aplikasi flip.id menggunakan metode TAM dan EUCS," *J. Emerg. Inf. Syst. Bus. Intell.*, vol. 2, no. 4, p. 4, 2021.

[16] F. Gusni, R. Gunawan, L. Setiyani, and Y. Rostiani, "Analisis kepuasan pengguna akhir PLN Mobile menggunakan Metode EUCS (End User Computing Satisfaction)," *Pros. Semin. Nas. Inov. dan Adopsi Teknol.*, vol. 3, no. 1, pp. 60–71, 2023.

[17] A. G. Zakinah, A. E. Prasetiyanto, F. Khairani, A. Mahendra Wijaya, D. Ariatmanto, and T. Informatika, "Analisis Penerimaan Sistem Informasi Dapodik Menggunakan Metode Webqual dan EUCS," *Semin. Nas. Inov. Teknol.*, vol. 1, no. 1, pp. 1–6, 2021.d S. R. Nurdin, "Analisis Kualitas Sistem Informasi MELISA Terhadap Kepuasan Pengguna Dengan Menggunakan Metode WebQual 4 . 0 dan EUCS (End-User Computing Satisfaction)," *J. Emerg. Inf. Syst. Bus. Intell.*, vol. 04, no. 02, pp. 70–76, 2023.