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Research Article

Comparative Analysis of User Satisfaction Levels of Threads and X Applications Using the PIECES Method

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A B S T R A C T

Technology and information systems are high-speed in their application in helping community activities in the digital era. People's desire to access the Internet has increased to provide opportunities for companies to provide technology services, namely the Internet. One of the latest platforms to gain popularity among young users is Threads, which Instagram launched. X is an online social networking and microblogging service that allows users to send and receive text-based messages or posts. To determine whether Threads and X can be used to the best of their ability to access information, an analysis of the performance of the applications was conducted. This study uses the PIECES method to determine user satisfaction with the Threads and X applications. This research uses the PIECES analysis method, which consists of several assessment indicators (Performance, Information and Data, Economics, Control, Security, Efficiency, and Service) by distributing questionnaires to active users of Threads and X from various regions to get 1002 respondents. The results of this study show that Threads receives an average score of 3.61, indicating that users are satisfied, while X gets an average score of 4.37, indicating that users are satisfied. So, the results of this study show that the average level of satisfaction of X users is more significant than Threads. This shows that X's average level of user satisfaction is superior to that of Threads.

1. INTRODUCTION

Now, technology and information systems are fast-paced in their application to help community activities in the digital era. It can be seen from the significant role of technology in supporting the operational activities of a company when implementing its business processes. Of course, information technology can change people's attitudes in carrying out activities that were previously carried out manually and can now be carried out digitally to be more efficient and effective. The community's desire to access the Internet has increased to provide opportunities for companies to provide technology services, namely the Internet. Technology services fulfill needs well and are very important in providing customer satisfaction. [1]. The existence of social media can facilitate communication and relationships between individuals. [2]. Social media is a new medium in today's global era. For example, Threads, X, and others can be used easily, anywhere, and anytime. All fields of economics, politics, culture, law, education, security, and defense at the regional and international levels always receive media attention at any time.

One of the latest platforms to gain popularity among young users is Threads, which Instagram launched. According to Mark Zuckerberg, Chairman of Meta, the newly launched Threads app aims to go beyond X. Threads allows users to create posts with a maximum length of 500 characters and offers many X-like features. Threads is like X because it provides users a platform to share text-based content. However, despite the similarities, the functionality and appearance of Threads features are not very different from those of X. Threads includes features such as checking mentions, viewing profiles, and more. [3]. X is an online

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social networking and microblogging service that allows users to send and receive text-based messages or posts of up to 280 characters in a tweet to express opinions, share information, and document daily activities [4].

Based on research conducted by Ni Putu, Nengah, and Helmy, the information system user satisfaction analysis using the PIECES Framework method is explained. The results showed that of the six PIECES Framework variables, data analysis and calculations used the PIECES Framework method because it effectively analyzed the system per variable so that the system could be more deeply evaluated. It can be concluded that the application of the Panak. When viewed from the PIECES analysis, its users can use the Id information system well. [5].

To determine whether Threads and X can be best used in accessing information, an analysis of the performance of the applications is conducted. Performance analysis of Threads and X can be carried out by measuring user satisfaction. User satisfaction is a benchmark related to the performance of information systems, whether negative or positive, and whether it is to the user's objectives. The approach used in measuring the level of user satisfaction of Threads and X is to use the PIECES Framework method. The PIECES Framework method is a framework or method used to distinguish problems or problems that exist in scope definition, system design, and analysis. PIECES has six variables: Performance, Information and Data, Economics, Control and Security, Efficiency, and Service. These variables are calculated using a formula to obtain an average result value.

Previous research [6] About Comparative Analysis of Selection Decisions for Using the Shopee and TikTok Shop Applications, in this case, the Shopee and TikTok Shop applications are two platforms that are very popular among smartphone users. The results of this study can be a guide for application users to obtain the best information to make the right decision in choosing an application based on their preferences and needs. Previous research [7] about analyzing the level of user satisfaction of library information systems using the PIECES Framework results are in the form of web applications that can analyze the level of application satisfaction on library information systems with the PIECES Framework analysis method. Research [8] Previous research examining the level of satisfaction with the application of WhatsApp for media information with the PIECES framework technique explains users feeling satisfaction with the application to share information. Research [9] Previous research on analyzing the satisfaction level of the MyTelkomsel application through heuristic evaluation and the PIECES method findings are explained to measure the satisfaction level of the MyTelkomsel application with heuristic evaluation and the PIECES method. Previous research [10] about the System Performance Evaluation of Shopee E-commerce Applications applying the PIECES Framework Method to measure the relationship between System Performance Evaluation through PIECES on E-commerce Applications.

The PIECES method is a technique that includes the classification or grouping of problems and the development of solutions to these problems. The grouping consists of six variables, namely:

1. Performance: This category evaluates whether a system can execute commands quickly to achieve short-term goals.
2. Information and Data: this category evaluates whether the application can provide high-quality information. Quality information is determined by the data's accuracy, relevance, presentation, and flexibility.
3. Economics: this category evaluates how to utilize the costs incurred in presenting information in the application. The increasing demand for cost-effective information can influence cost control and increase the benefits derived from an application.
4. Control and security: this category evaluates the analyzed application according to system integrity, security, and ease of access.
5. Efficiency: this category evaluates whether existing resources are used properly and efficiently. A system can be considered efficient based on reusability and maintainability.
6. Service: This category evaluates whether the service offers a variety of categories and provides accurate, reliable, and convenient services to users and visitors of the application [11].

The formula of the PIECES method used to obtain the average level of satisfaction is shown in equation (1)

$$RK = \frac{JSK}{JK} \quad (1)$$

Information:

RK	= Average Satisfaction
JSK	= Total score of the questionnaire
JK	= Number of Questionnaires

Threads is a social media application that allows users to interact with others worldwide. With Threads, users can post text, images, and videos and interact with other users' posts through replies, reposts, and likes. It can be downloaded through the Google Play Store for Android device users and the Apps Store for iOS device users. [12].

X is a microblogging social media platform created in 2006 under the name Twitter and in 2023 renamed X, which allows users to create posts called "tweets" with a 280-character limit with optional additional images, videos, web links, and links to other social media platforms. Users can utilize retweets and likes to support posts. Hashtags are promotional tools used in X to enhance and focus on the crux of the discussion and help identify tweets tagged with the same hashtag. [13].

SPSS stands for "Statistical Package for the Social Sciences" or "Statistical Package Software for Social Sciences" in Indonesian. SPSS is software that is applied as a statistical analyzer. It supplies tools and techniques for data manipulation, exploration, and hypothesis testing. How to perform analysis using SPSS by importing data, variable definition, data cleaning and preparation, descriptive statistics, data exploration, inferential statistics, and reporting and interpretation [14].

Tableau is a powerful and popular data visualization software commonly applied in the industry. This tool supplies features that allow users to clean, import, and visualize data intuitively and interactively. Through Tableau, companies can create informative and attractive dashboards to understand their data, identify areas for improvement, and make decisions according to the evidence. [15].

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2. METHODS

2.1. Research Design

The quantitative research design uses a unique PIECES method with six variables. The research design in this study can be shown in Figure 1.

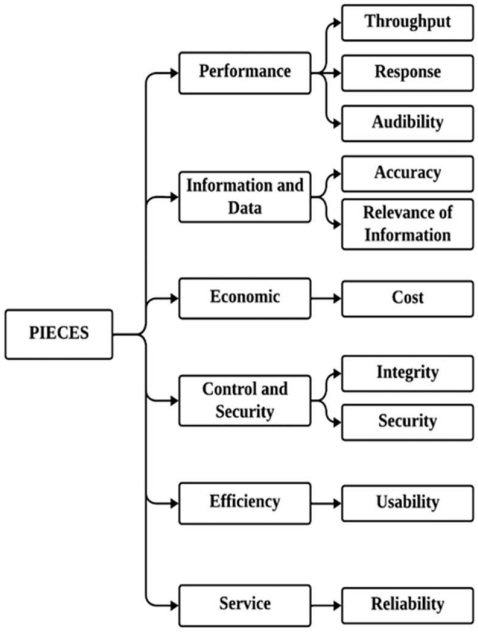

Figure 1. Research design using the PIECES method.

Picture 1 is a breakdown of the method based on the variables used in the questionnaire. Tables 1 to 6 below list research statements used in the questionnaire based on the PIECES method variables.

Table 1. List of Performance Indicator Statements (X1)

No	Statement
1.	The Threads/X app runs fast and responsively.
2.	The Threads/X app rarely lags or crashes during use.
3.	The quality of images (4096 pixels) and videos (720p) uploaded to the Threads/X App remains good.
4.	Threads/X application rarely crashes or errors.
5.	I am satisfied with the general performance of Threads/*X* App on Android mobile devices starting from version 9.0 or IOS starting from version 14.0.
6	The Threads/X app provides a seamless and uninterrupted user experience (ad interruption).

Table 2. List of Information and Data Indicator Statements (X2)

No	Statement
1.	The Threads/X app provides easy access to the information and content I need.
2.	I connect with my friends and get relevant updates through the Threads/X App.
3.	I can easily search for interesting content on the Threads/X App.
4.	The Threads/X app provides good options for managing and organizing my data.
5.	The Threads/X app provides valuable and actual information.
6	The Threads/X app helps me stay connected and up-to-date with news and events.

Table 3. Statement List of Economics Indicator (X3)

No	Statement
1.	The Threads/X app provides essential services for free with no subscription fees.
2.	Threads/X app provides reasonable payment options for additional features or fewer ads.
3.	The Threads/X app provides economic benefits in terms of connectivity and entertainment.
4.	The Threads/X app provides an opportunity to save money on communication and entertainment.
5.	The Threads/X app provides an economical solution for interacting with friends and family.
6	I am satisfied that the value I get from the Threads/X App is worth my investment time and energy.

Table 4. List of Control and Security Indicator Statements (X4)

No	Statement
1.	The Threads/X app protects my data and privacy well.
2.	The Threads/X app provides easily accessible and configurable privacy settings.
3.	I feel safe and comfortable using *Threads/X* App without worrying about data leakage.
4.	The Threads/X app has good controls over who can access my content.
5.	Apps are protected from malicious acts such as hacking or harassment through Threads/X.
6	The Threads/X app gives users great control over account settings and security.

Table 5. List of Efficiency Indicator Statements (X5)

No	Statement
1.	The Threads/X app helps me save time when communicating with friends and family.
2.	I was able to quickly navigate and use the features of the Threads/X App with ease.
3.	The Threads/X app helps me quickly find content that matches my interests.
4.	The Threads/X App is an efficient way to interact with other users.
5.	The Threads/X app allows me to manage my time and energy well while using the app.
6	The Threads/X app provides an efficient tool for managing and filtering content.

Table 6. List of Service Indicator Statements (X6)

No	Statement
1.	The Threads/X App customer support team responded well to my questions and concerns.
2.	The Threads/X app provides sound guidance and assistance in using its features.
3.	I was helped by the Threads/X App customer service when I needed help.
4.	The Threads/X app provides regular updates and improvements that improve the quality of service.
5.	I feel connected to the Threads/X App user community and get support from them.
6	The Threads/X application provides a good service in supporting users and solving problems.

The scale for measuring the level of satisfaction used in this study is very satisfying, satisfying, less satisfying, unsatisfying, and very unsatisfying. The results of using the scale will change the form of the answer so that the data can be used.

Table 7. Satisfaction Level Scale

Answer	Score
Very Satisfactory	5
Satisfactory	4
Less than Satisfactory	3
Unsatisfactory	2
Very Unsatisfactory	1

Table 8. Satisfaction Level [7]

Average	Rating Category
4.92 – 5	Very Satisfactory
3.4 – 4.91	Satisfactory
2.6 – 3.39	Less than Satisfactory
1.8 – 2.59	Unsatisfactory
1.00 – 1.79	Very Unsatisfactory

2.2. Research Techniques

2.2.1. Research Time

This research will be carried out by directly observing users' Threads and X applications. The research time will be carried out from December 2023 to January 2024.

2.2.2. Data Collection Technique

In this method, the technique of collecting data is by giving a link to a written statement or device to the respondent to be answered online. With this type of closed questionnaire, the answers have been prepared, and the respondents only need to determine the answers that have been prepared. The data is obtained through the distribution of questionnaires by Threads and X users, namely by providing statements related to the problems to be studied and testing the results with predetermined criteria.

2.2.3. Data Analysis Technique

This research analysis uses the PIECES method to determine the level of user satisfaction, which is then analyzed quantitatively. Quantitative data analysis was done using a Likert scale questionnaire and then processed with SPSS and Tableau applications.

2.2.4. Data Testing Technique

In this case, the research focuses on conducting two tests, namely validity and reliability, to see the final results of the questionnaire given to Threads and X users from various regions, which were then processed using a Likert scale. The Table R formula (simple correlation coefficient) used to test the instrument in the validity test can be seen in Table 9.

Table 9. Table r for df 190 to 200

df = (N-2)	Significance Level			
	0.1	0.05	0.02	0.01
190	0.1191	0.1417	0.1678	0.1855
191	0.1188	0.1413	0.1674	0.1850
192	0.1184	0.1409	0.1669	0.1845
193	0.1181	0.1406	0.1665	0.1841
194	0.1178	0.1402	0.1661	0.1836
195	0.1175	0.1398	0.1657	0.1831
196	0.1172	0.1395	0.1652	0.1827
197	0.1169	0.1391	0.1648	0.1822
198	0.1166	0.1388	0.1644	0.1818
199	0.1164	0.1384	0.1640	0.1813
200	0.1161	0.1381	0.1636	0,1809

3. RESULTS

3.1. Validity Test

In this study, we conducted a validity test using the SPSS version 21 application; validity testing was carried out to determine whether a questionnaire was valid from the variable. This validity test used 202 initial sample data to assess the df value or degree of freedom using the formula (df = N-2), where N is the sample size. The validity testing results in this study are shown in Tables 10 and 11.

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Table 10. Threads Application Questionnaire Validity Test Result

No.	Variables	Indicator	r Count	r Table	Description
1.	Performance (X1)	X1.1	0.773	0.180	Valid
		X1.2	0.793	0.180	Valid
		X1.3	0.814	0.180	Valid
		X1.4	0.788	0.180	Valid
		X1.5	0.799	0.180	Valid
		X1.6	0.807	0.180	Valid
2.	Information and Data (X2)	X2.1	0.814	0.180	Valid
		X2.2	0.817	0.180	Valid
		X2.3	0.812	0.180	Valid
		X2.4	0.740	0.180	Valid
		X2.5	0.777	0.180	Valid
		X2.6	0.838	0.180	Valid
3.	Economics (X3)	X3.1	0.827	0.180	Valid
		X3.2	0.834	0.180	Valid
		X3.3	0.845	0.180	Valid
		X3.4	0.812	0.180	Valid
		X3.5	0.819	0.180	Valid
		X3.6	0.803	0.180	Valid
4.	Control and Security (X4)	X4.1	0.840	0.180	Valid
		X4.2	0.834	0.180	Valid
		X4.3	0.850	0.180	Valid
		X4.4	0.804	0.180	Valid
		X4.5	0.806	0.180	Valid
		X4.6	0.839	0.180	Valid
5.	Efficiency (X5)	X5.1	0.804	0.180	Valid
		X5.2	0.797	0.180	Valid
		X5.3	0.842	0.180	Valid
		X5.4	0.794	0.180	Valid
		X5.5	0.820	0.180	Valid
		X5.6	0.813	0.180	Valid
6.	Service (X6)	X6.1	0.823	0.180	Valid
		X6.2	0.861	0.180	Valid
		X6.3	0.838	0.180	Valid
		X6.4	0.822	0.180	Valid
		X6.5	0.818	0.180	Valid
		X6.6	0.845	0.180	Valid

Based on Table 10 using the product moment method with the validity test assessment criteria, namely, if the correlation coefficient value (r Count) is more significant than r Table (N = 202, α = 0.01), it can be seen that the df value in this study is:

df = 202-2

df = 200, with a significant level of 0.01, the considerable level is 0.180, as found in Table 9.

The validity test results from Table 10 show that the questions on all variables have a correlation coefficient (r Count) greater than r Table (0.180), and it can be concluded that the Threads application statements on all variables are valid.

Table 11. Application Questionnaire Validity Test Results X

No.	Variables	Indicator	r Count	r Table	Description
1.	Performance (X1)	X1.1	0.689	0.180	Valid
		X1.2	0.670	0.180	Valid
		X1.3	0.618	0.180	Valid
		X1.4	0.578	0.180	Valid
		X1.5	0.503	0.180	Valid
		X1.6	0.620	0.180	Valid
2.	Information and Data (X2)	X2.1	0.681	0.180	Valid
		X2.2	0.558	0.180	Valid
		X2.3	0.564	0.180	Valid
		X2.4	0.616	0.180	Valid
		X2.5	0.612	0.180	Valid
		X2.6	0.616	0.180	Valid
3.	Economics (X3)	X3.1	0.679	0.180	Valid
		X3.2	0.626	0.180	Valid
		X3.3	0.629	0.180	Valid
		X3.4	0.508	0.180	Valid
		X3.5	0.632	0.180	Valid
		X3.6	0.576	0.180	Valid
4.	Control and Security (X4)	X4.1	0.640	0.180	Valid
		X4.2	0.558	0.180	Valid
		X4.3	0.648	0.180	Valid
		X4.4	0.631	0.180	Valid
		X4.5	0.645	0.180	Valid
		X4.6	0.709	0.180	Valid
5.	Efficiency (X5)	X5.1	0.695	0.180	Valid
		X5.2	0.418	0.180	Valid
		X5.3	0.542	0.180	Valid
		X5.4	0.639	0.180	Valid
		X5.5	0.581	0.180	Valid
		X5.6	0.651	0.180	Valid
6.	Service (X6)	X6.1	0.700	0.180	Valid
		X6.2	0.603	0.180	Valid
		X6.3	0.647	0.180	Valid
		X6.4	0.676	0.180	Valid
		X6.5	0.694	0.180	Valid
		X6.6	0.661	0.180	Valid

Based on Table 11 using the product moment method with the validity test assessment criteria, namely, if the correlation coefficient value (r Count) is more significant than r Table (N = 202, α = 0.01), the alpha value must be calculated; it can be seen that the df value in this study is:

df = 202-2

df = 200, with a significant level of 0.01, the considerable level is 0.180, as found in Table 9.

The validity test results from Table 11 show that the questions on all variables have a correlation coefficient (r Count) greater than r Table (0.138); it can be concluded that the application X statements on all variables are declared valid.

3.2. Reliability Test

The reliability test is carried out to determine whether the questionnaire can be trusted to reveal information in the field, so the questionnaire is reliable. The questionnaire can be reliable if Cronbach Alpha> 0.600 means reliable. This reliability test was carried out using 202 initial sample data. The reliability testing results in this study can be displayed in Tables 12 and 13.

Table 12. Reliability Test Results of Threads Application Questionnaire

Variables	Item N	Cronbach's Alpha Value	Description
Performance (X1)	6	0.882	Reliable
Information and Data (X2)	6	0.886	Reliable
Economics (X3)	6	0.903	Reliable
Control and Security (X4)	6	0.909	Reliable
Efficiency (X5)	6	0.896	Reliable
Service (X6)	6	0.912	Reliable

Table 13. Reliability Test Results of Application Questionnaire X

Variable	Item N	Cronbach's Alpha Value	Description
Performance (X1)	6	0.670	Reliable
Information and Data (X2)	6	0.647	Reliable
Economics (X3)	6	0.655	Reliable
Control and Security (X4)	6	0.705	Reliable
Efficiency (X5)	6	0.642	Reliable
Service (X6)	6	0.745	Reliable

Tables 12 and 13 show that the results of reliability testing on all variables get a Cronbach's Alpha value above 0.600, so it can be declared reliable, so it can be concluded that the questionnaires on the Threads and X applications can be trusted to reveal information in the field and are trustworthy.

3.3. Description of Outcome Variables

After conducting validity and reliability tests, it is declared valid and reliable. Then, data analysis is carried out on each variable to determine the user satisfaction of the Threads and X applications using the PIECES method. Based on the results of the questionnaire distributed, it gets 1002 respondents who are active users of the Threads and X applications to get the results of user satisfaction processed and calculated using a formula to get the average results of user satisfaction.

3.3.1. Performance

The following is the calculation score on the Performance indicator in the Threads and X applications, which can be seen in Tables 14 and 15.

Table 14. Application Performance Score Threads

Score	Statement						Total
	P1	P2	P3	P4	P5	P6	
5	46	71	79	58	56	60	370
4	313	266	231	254	276	253	1593
3	91	112	134	127	112	135	711
2	49	42	47	54	47	47	286
1	2	10	10	8	10	6	46

Description: P is statement one on the variable indicator.

The formula for obtaining average satisfaction (*RK*) is addressed in equation (1)

$$RK = \frac{(5*370)+(4*1.593)+(3*711)+(2*286)+(1*46)}{370+1.593+711+286+46}$$

$$RK = \frac{10.973}{3.006}$$

$$RK = 3{,}65$$

Based on the results of calculating the average user satisfaction of the Threads application on the performance variable indicator, it gets an average value of 3.65, which is included in the satisfactory category.

Table 15. Application Performance Score X

Score	Statement						Total
	P1	P2	P3	P4	P5	P6	
5	201	251	238	238	222	232	1382
4	269	205	224	212	242	237	1389
3	20	35	34	46	29	24	188
2	10	7	4	3	5	6	35
1	1	3	1	2	3	2	12

$$RK = \frac{(5*1.382)+(4*1.389)+(3*188)+(2*35)+(1*12)}{1.382+1.389+188+35+12}$$

$$RK = \frac{13.113}{3.006}$$

$$RK = 4{,}36$$

Based on the calculation of the average application user satisfaction X value on the performance variable indicator, we obtained a value of 4.36, which is included in the satisfactory category. This shows that application X has provided adequate performance to users.

3.3.2. Information and Data

The following is the calculation score on the Information and Data indicator in the Threads and X applications, which can be seen in Tables 16 and 17.

Table 16. Threads Application Information and Data Score

Score	Statement						Total
	P1	P2	P3	P4	P5	P6	
5	51	66	62	50	47	66	342
4	247	243	235	259	270	233	1487
3	149	134	137	129	129	150	828
2	44	48	53	51	50	45	291
1	10	10	14	12	5	7	58

$$RK = \frac{(5*342)+(4*1.487)+(3*828)+(2*291)+(1*58)}{342+1.487+828+291+58}$$

$$RK = \frac{10.782}{3.006}$$

$$RK = 3{,}58$$

Based on the calculation of the average user satisfaction value of the Threads application on the information and data variable indicator, it obtained a value of 3.58, which is included in the satisfactory category.

Table 17. X Application Information and Data Score

Score	Statement						Total
	P1	P2	P3	P4	P5	P6	
5	225	248	231	228	254	259	1445
4	244	197	225	236	217	224	1343
3	25	48	40	31	23	14	181
2	6	5	4	5	6	2	28
1	1	3	1	1	1	2	9

$$RK = \frac{(5*1.445)+(4*1.343)+(3*181)+(2*28)+(1*9)}{1.445+1.343+181+28+9}$$

$$RK = \frac{13.205}{3.006}$$

$$RK = 4{,}39$$

Based on the calculation of the average value of application user satisfaction X on the information and data variable indicator, a value of 4.39 was obtained, which is included in the satisfactory

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category. This shows that application X has provided adequate information to its users.

3.3.3. *Economics*

The following is the calculation score on the Economics indicator in the Threads and X applications, which can be seen in Tables 18 and 19.

Table 18. Threads Application Economics Score

Score	Statement						Total
	P1	P2	P3	P4	P5	P6	
5	44	66	61	53	66	53	343
4	282	259	254	243	249	264	1551
3	119	119	127	139	134	133	771
2	51	51	45	51	39	48	285
1	5	6	14	15	13	3	56

$$RK = \frac{(5*343)+(4*1.551)+(3*771)+(2*285)+(1*56)}{343+1.551+771+285+56}$$

$$RK = \frac{10.858}{3.006}$$

RK = 3,61

Based on the calculation of the average value of Threads user satisfaction on the economics variable indicator, it obtained a value of 3.61, which is included in the satisfactory category.

Table 19. Application Economics Score X

Score	Statement						Total
	P1	P2	P3	P4	P5	P6	
5	213	279	238	232	241	224	1427
4	253	167	220	222	220	252	1334
3	27	45	35	42	29	20	198
2	6	8	6	2	9	5	36
1	2	2	2	3	2	0	11

$$RK = \frac{(5*1.427)+(4*1.334)+(3*198)+(2*36)+(1*11)}{1.427+1.334+198+36+11}$$

$$RK = \frac{13.148}{3.006}$$

RK = 4,37

Based on the calculation of the average value of user satisfaction, X on the economics variable indicator obtained a value of 4.37, which is included in the satisfactory category. This shows that application X has made it easy for users to exchange information without wasting money and time.

3.3.4. *Control and Security*

The following is the calculation score on the Control and Security indicator in the Threads and X applications, seen in Tables 20 and 21.

Table 20. Threads Application Control and Security Score

Score	Statement						Total
	P1	P2	P3	P4	P5	P6	
5	60	70	61	52	64	58	365
4	258	279	262	258	266	274	1597
3	134	100	115	126	112	120	707
2	42	41	46	51	51	41	272
1	7	11	17	14	8	8	65

$$RK = \frac{(5*365)+(4*1.597)+(3*707)+(2*272)+(1*65)}{365+1.597+707+272+65}$$

$$RK = \frac{10.943}{3.006}$$

RK = 3,64

Based on the calculation of the average value of Threads user satisfaction on the control and security variable indicator, a value of 3.64 was obtained, which is included in the satisfactory category.

Table 21. X Application Control and Security Score

Score	Statement						Total
	P1	P2	P3	P4	P5	P6	
5	227	271	228	222	252	225	1425
4	237	188	228	236	205	248	1342
3	32	34	40	37	34	22	199
2	3	5	3	3	6	4	24
1	2	3	2	3	4	2	16

$$RK = \frac{(5*1.425)+(4*1.342)+(3*199)+(2*24)+(1*16)}{1.425+1.342+199+24+16}$$

$$RK = \frac{13.154}{3.006}$$

RK = 4,37

Based on the calculation of the average value of user satisfaction X on the control and security variable indicator, we obtained a value of 4.37, which is included in the satisfactory category. This shows that application X provides a sense of security in security because it uses an authentication security system.

3.3.5. *Efficiency*

The following is the calculation score on the Efficiency indicator on the Threads and X applications, which can be seen in Tables 22 and 23.

Table 22. Threads Application Efficiency Score

Score	Statement						Total
	P1	P2	P3	P4	P5	P6	
5	49	74	53	52	66	48	342
4	241	262	250	247	257	274	1531
3	148	115	143	140	124	132	802
2	60	40	43	46	40	41	270
1	3	10	12	16	14	6	61

$$RK = \frac{(5*342)+(4*1.531)+(3*802)+(2*270)+(1*61)}{342+1.531+802+270+61}$$

$$RK = \frac{10.841}{3.006}$$

RK = 3,60

Based on the calculation of the average value of Threads user satisfaction on the efficiency variable indicator, a value of 3.60 was obtained, which is included in the satisfactory category.

Table 23. X Application Efficiency Score

Score	Statement						Total
	P1	P2	P3	P4	P5	P6	
5	207	254	246	217	246	233	1403
4	258	210	218	240	216	243	1385
3	31	34	29	40	30	18	182
2	2	1	7	3	7	6	26
1	3	2	1	1	2	1	10

$$RK = \frac{(5*1.403)+(4*1.385)+(3*182)+(2*26)+(1*10)}{1.403+1.385+182+26+10}$$

$$RK = \frac{13.163}{3.006}$$

$$RK = 4{,}37$$

Based on the calculation of the average value of user satisfaction, X on the efficiency variable indicator obtained a value of 4.37, which is included in the satisfactory category. This shows that application X makes it easy and efficient to communicate.

3.3.6. Service

The following is the calculation score on the Service indicator in the Threads and X applications, which can be seen in Tables 24 and 25.

Table 24. Threads Application Service Score

Score	Statement						Total
	P1	P2	P3	P4	P5	P6	
5	47	67	53	51	57	62	337
4	286	270	271	259	276	262	1624
3	114	109	110	128	113	125	699
2	41	44	50	51	45	41	272
1	13	11	17	12	10	11	74

$$RK = \frac{(5*337)+(4*1.624)+(3*699)+(2*272)+(1*74)}{337+1.624+699+272+7}$$

$$RK = \frac{10.896}{3.006}$$

$$RK = 3{,}62$$

Based on the results of the calculation of the average value of Threads user satisfaction on the service variable indicator, a value of 3.62 was obtained, which is included in the satisfactory category.

Table 25. Application Service Score X

Score	Statement						Total
	P1	P2	P3	P4	P5	P6	
5	213	264	240	227	270	263	1477
4	246	199	214	224	199	211	1293
3	35	32	40	43	24	19	193
2	6	3	5	5	6	6	31
1	1	3	2	2	2	2	12

$$RK = \frac{(5*1.477)+(4*1.293)+(3*193)+(2*31)+(1*12)}{1.477+1.293+193+31+12}$$

$$RK = \frac{13.210}{3.006}$$

$$RK = 4{,}39$$

Based on the results of the calculation of the average value of user satisfaction, X on the service variable indicator obtained a value of 4.39, which is included in the satisfactory category. This shows that application X provides excellent service for users through the features provided.

4. DISCUSSION

The results of the analysis of Threads and X application respondents based on the age of the respondents can be seen in Figure 2.

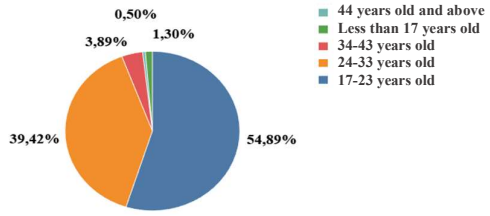

Figure 2. Characteristics of Threads and X App Respondents by Age

Based on the results in Figure 3, it can be seen that there are 550 respondents aged 17-23 years, 395 respondents aged 24-33 years, 39 respondents aged 34-43 years, 13 respondents aged less than 17 years, and five respondents aged 44 years and over. Thus, it can be concluded that the dominant users of the Threads and X applications are aged 17-23 years.

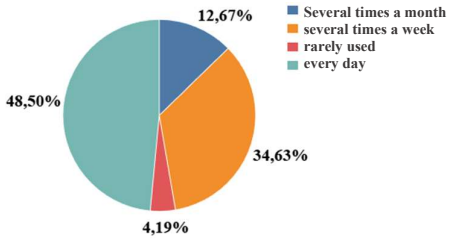

Figure 3. Characteristics of Respondents Based on Use of Threads and X

Based on the results in Figure 3, how often do respondents use the Threads and X applications? Respondents who use the Threads and X applications every day 486 people; respondents who use the Threads and X applications several times a week 347 people; respondents who use the Threads and X applications several times a month 127 people; and respondents who rarely use the Threads and X applications are 42 people. Thus, it can be concluded that the dominant users of the Threads and X applications use the application daily for their needs.

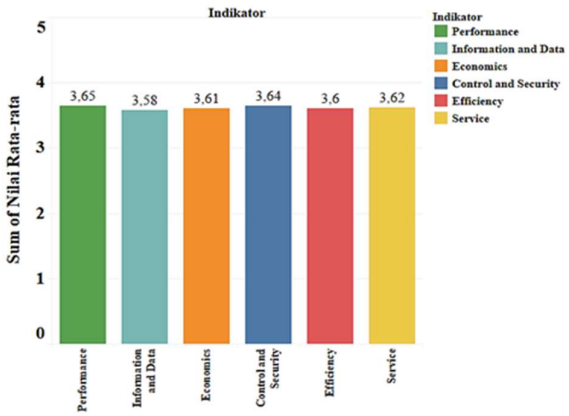

Figure 4. Graph of User Satisfaction Level of Threads Application

https://doi.org/10.25077/TEKNOSI.v10i1.2024.17-26

Based on the calculation results in Figure 4 from a list of questions that have been distributed to respondents who users of the Threads application, with several variables (Performance, Information and Data, Economics, Control and Security, Efficiency, Service) getting the average number of results on the Threads application 3.61 which is included in the satisfactory category. This means that the application of the current information system is running well.

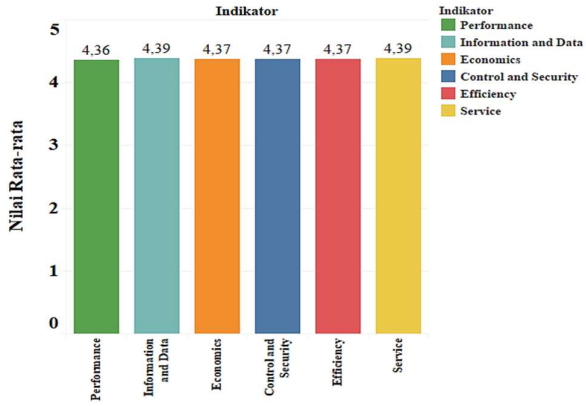

Figure 5. Graph of Application User Satisfaction Level X

Based on the calculation results in Figure 5 from a list of questions that have been distributed to respondents who users of the Threads and X applications are, with several variables (*Performance, Information and Data, Economic, Control and Security, Efficiency, Service*) with the number of average results in the X application 4.37 which is included in the satisfactory category. This means that the application of information systems in application X is running well.

5. CONCLUSIONS

Based on the results of the research and discussion above, it can be concluded that the analysis of the level of user satisfaction of the Threads and X applications using the PIECES method are in the satisfactory category based on six indicators. The user satisfaction level of the Threads application gets an average value of 3.61, and the X application gets an average value of 4.37. This shows that the average X application user satisfaction level is superior to that of the Threads application.

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