

Factors on Mobile Application User Satisfaction in the Largest Indonesian Internet Service Provider (ISP)

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Abstract—Many users complain about using the largest mobile Internet Service Provider (ISP) application in Indonesia, MyIndihome, such as difficulties in verifying, logging in, and changing cell phone numbers and emails. With these complaints, the satisfaction of the MyIndihome application users decreases. The research aims to determine the effect of information quality, system quality, service quality, ease of use, usefulness, and chatbot effectiveness on user satisfaction with MyIndihome. Chatbot effectiveness is a novelty of the research because it has not been studied in previous research. The research applies a quantitative approach. Then the sampling technique used is probability sampling, and the method is simple random sampling with 417 respondents. Data collection techniques are carried out by distributing online questionnaires, and the data are statistically processed with SmartPLS and analyzed by Structural Equation Model (SEM). After carrying out several stages of testing from validity tests, reliability tests, and structural models, the results show that information quality, system quality, ease of use, usability, and chatbot effectiveness have a significant effect on user satisfaction. However, the service quality has no effect. These results can help companies to increase user satisfaction with the MyIndihome application. They can increase the variables that influence user satisfaction with the MyIndihome application.

Index Terms—Mobile Application, User Satisfaction, Internet Service Provider (ISP)

I. INTRODUCTION

AS technology develops in the use of mobile applications, user satisfaction is important because it is one of the essential points for the success of making mobile applications. The purpose of making a mobile application is to make investment easier for customers and companies in the long term. With the importance

of user satisfaction, the research is critical to be carried out, especially in the telecommunications sector, which has intensified digitization currently.

Telecommunication has a vital role in human life. It is rapidly progressing and developing. One of the important aspects of telecommunication is the Internet. Currently, the Internet is essential for humans, especially with the impact of the pandemic. Many activities have been shifted online.

The development of the Internet is also experienced in Indonesia. In 2021, there were 202.6 million Internet users in Indonesia. Based on the total population of Indonesia, which is 274.9 million people, it means that 73.7% of the population has experienced access to cyberspace. It is also known that currently, 345.8 million Indonesians use cell phones. Likewise, interesting data state that there are 170 million active social media users [1].

In 2020, 14.8% or almost 40.6 million people used fixed Internet, and more than 9.8% used the Internet from the Indihome provider. This provider has the largest number in Indonesia [2]. Indihome is an Internet Service Provider (ISP) product from Telkom that provides triple-play services (Internet, telephone, and Internet Protocol Television (IPTV.)) Telkom has developed a mobile application called MyIndihome to make it easier for prospective and existing Indihome customers [3]. The MyIndihome application can be used to submit new installations, check the bills and usage, see promotional information, report, and do other transactions.

MyIndihome application users have their complaints in terms of applications and services. With these complaints, MyIndihome users provide feedback by giving ratings on Google Play Store and App Store. Figure 1 shows the MyIndihome application rating in the past years. In July–September 2020, myIndihome rating

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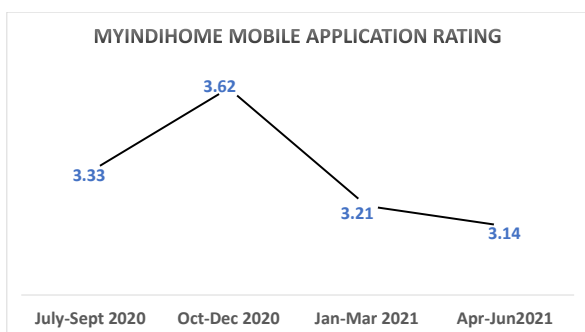


Fig. 1. MyIndihome application rating.

TABLE I
MYINDIHOMER’S USAGE PROBLEMS.

Usage Problem in MyIndihome	Percentage (%)
Completion of Old Reports	21.3
Slow Internet	15.0
Difficulty in Verification	14.4
Failed Login	10.1
Difficulty in Changing Email and Contact Person Number	5.4
Crashes After Updating	8.1
Frequently Force Closing	4.3
Others	21.4

was 3.33. Then, it increased in October–December 2020 to 3.62. However, in January–March 2021, it decreased to 3.21. In April–June 2021, it decreased again to 3.14. The decrease indicates certain factors that cause a lack of user satisfaction in the MyIndihome application [4].

In previous studies, the factors that affect user satisfaction have been explored. However, more exploration is needed regarding the variables used to determine the satisfaction of using the application, in this case, the MyIndihome application. The users’ issue with the MyIndihome application has become a controversial topic due to negative issues spreading in the community regarding the application. The data about problems in the MyIndihome application from July 2020–July 2021 in the Google Play Store review can be seen in Table I [4].

Based on Table I, some of the complaints in the MyIndihome application, such as slow Internet, can be resolved with handling guidelines. Meanwhile, difficulty in changing mobile phone numbers and emails and verification can be resolved by a chatbot. However, previous research has not yet discussed the chatbot effectiveness on user satisfaction. The chatbot is a research novelty. They have only discussed factors that affect user satisfaction, namely information quality, system quality, service quality, ease of use, and usefulness.

The research focuses on the factors that affect user satisfaction with the MyIndihome application, as the application is intended for Indihome users’ convenience. The research is important and urgent because complaints about the use of mobile applications (MyIndihome) continue to increase. It is hoped that the research can be a recommendation for telecommunications sector companies, especially in Indonesia, to improve mobile applications and increase user satisfaction to create convenience in digitalization. Therefore, the research maintains previous research on the factors that influence user satisfaction, such as information quality, system quality, service quality, ease of use, and usefulness, and adds a chatbot effectiveness factor to determine the effect of these factors on user satisfaction.

A. User Satisfaction

Users receive the results of works or services from a person or an organization, so users are generally entitled to determine the quality of a product or output [5]. Meanwhile, user satisfaction is feedback and attitude after using an information system. It is a sign of how much the application can create value for the firm’s internal or external customers [6, 7]. User satisfaction is also one of the determinants of the successful implementation of an application. If users are satisfied, it means that users feel certain benefits. The application helps and facilitates the activities of these users. Additionally, user satisfaction includes the difference between expectations and perceived performance or results.

In this case, user satisfaction is the users’ response that appears after using the MyIndihome application, with expected function indicators, recommended application, and satisfied application [8–11]. These indicators represent whether or not the MyIndihome application users are satisfied with using its application. The indicators also assess the level of user satisfaction in using the MyIndihome application.

B. Information Quality

High information quality provides benefits for customers who need information about a particular product and service providers who provide the information [12]. Information quality is a measure of information value offered by the company to application users [13]. Information quality also refers to the extent to which the system provides useful information to users quickly and accurately [14, 15]. Hence, the information presented in the form of a report can be used as a basis for making decisions. The information quality is sufficient to capture the important characteristics of

the information system that is conveyed to the user as it provides all types of information that users need from companies [16]. It is also required to present relevant, accurate, and timely information. In this case, information quality refers to the information generated by the information system in the MyIndihome application, with indicators of accurate, detailed, consistent, and appropriate format information [14].

C. System Quality

The system is a collection of objects that work together to produce methods, procedures, and techniques that are combined and arranged in such a way that they become a unit to achieve a goal. System quality is also a factor determining user satisfaction [13]. It can be interpreted as a software and hardware system [17]. System quality focuses on the input in the system, while the quality of the information system focuses on software [8]. The system quality impacts user satisfaction, especially features that impact how application users use the system [10]. Therefore, if the quality of the system is getting better, the MyIndihome application users will use it more often and have a positive impact on their satisfaction. System quality has several indicators to test its success, including providing safe transactions, rarely experiencing errors, having a stable system, and being well-integrated [7, 10, 18, 19].

D. Service Quality

The concept of service quality meets the expectations of the expected service and is the same as what is felt. As a result, users are satisfied with the service quality provided by application providers' information system software. Service quality also measures the quality of support services that users receive from the information technology department or support personnel, such as the helpdesk [7, 16, 20]. In short, service quality can be considered as the support service provided, so it is important to include service quality as one of the factors that can have an impact on user satisfaction [10]. In the research, there are several indicators to see the influence between system services, including service quality, availability, and facilities for contacting the helpdesk [7, 10, 18].

E. Ease of Use

A system can be considered to have high quality if it is designed to meet user satisfaction through ease of use. In addition, it is not only the ease of using the system but also the ease of doing a job or task, where users will find it easier to work using the system instead of doing it manually [21]. Ease of use is a

user's assessment of how easy it is to access technology and systems and their appearance [21].

Ease of use can be interpreted as a concept that describes how easy it is to use technology. In other words, it is a benchmark for someone that technology can be understood and used easily. Ease of use is one of the keys that can lead to the actual use of a particular technology or system [9]. If an application is used frequently, it will increase the possibility of increasing user satisfaction. Several indicators are used to determine the effect of ease of use on user satisfaction, such as ease of use itself, user interaction, flexibility, and user expectation [9, 20, 22].

F. Usefulness

Usefulness is the stage in which users believe that using the system will facilitate their work and improve their job performance [21, 23–25]. Usefulness is also one factor in determining user satisfaction [25]. The definition reveals that usefulness is a belief in the decision-making process. The indicators of usefulness include saving time and costs and overall useful application [7, 20].

G. Chatbot Effectiveness

The effect of chatbot effectiveness on user satisfaction is a novelty in the research. A chatbot is a system that uses natural language. A chatbot is a system developed by making a conversation simulator between machines and humans as users. However, the conversation between machines and humans is still far from regular conversations between humans. This chatbot aims to help users achieve what is expected so that it will be more effective [26].

Moreover, several previous interviews have been conducted with several users to determine the chatbot effectiveness and its effect on user satisfaction with the MyIndihome application. The results of the interviews are many complaints from users that the chatbot can resolve. However, there are still many obstacles to using the chatbot feature. The complaint that the chatbot can solve is the difficulty of verification. It is acknowledged by application users, causing their lack of satisfaction in using the MyIndihome application because they still have to report their complaints to Telkom or other contact centers.

This chatbot effectiveness has several indicators. For example, the chatbot gives a fast response, solves problems, and provides guidance. The indicators are obtained from complaints experienced by MyIndihome application users, which have been described previously.

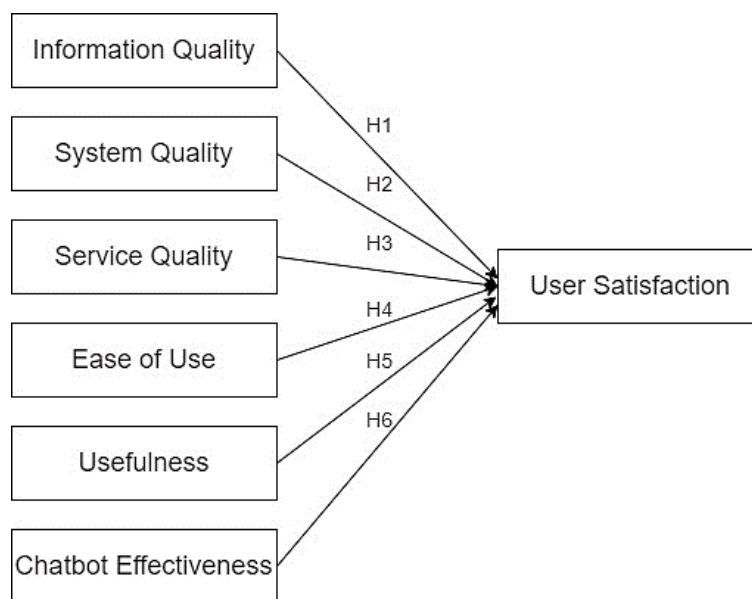


Fig. 2. Research model.

H. Previous Research

Previous research identifies factors influencing student satisfaction with e-learning system at the University of Dar es Salaam, Tanzania. It uses the Delone McLean 2003 model. The results show that system quality, service quality, and instructor quality affect learners' satisfaction as users. Meanwhile, course quality does not affect learner satisfaction [10].

Furthermore, previous research analyzes factors that affect satisfaction and usefulness in using students' attendance system. The analysis is carried out by using the Delone & McLean model and additional usability variables from the Technology Acceptance Model (TAM) models. The results imply that information quality, system quality, and service quality affect usefulness. In addition, information quality, system quality, service quality, and usefulness influence user satisfaction [24].

Another previous research analyzes the use of the Nursing Process System (NPS) with information quality, system quality, service quality, user satisfaction, perceived usefulness, perceived ease of use, perceived enjoyment, behavioral attitudes, and intentions after the nurses use the NPS system for more than a month. It uses Structural Equation Modeling (SEM). The results mention that information quality, system quality, and service quality influence user satisfaction. Furthermore, user satisfaction affects perceived usefulness, perceived ease of use, and perceived enjoyment, which also influence behavioral attitudes and intentions to use the system [27].

II. RESEARCH METHOD

The research applies quantitative methods because it uses questionnaires and performs numerical data processing. So, the results obtained are clear and accurate. The overview of the research model can be seen in Fig. 2. Based on the introduction and literature review described previously, the hypotheses of the research are as follows:

- H1: Information quality affects user satisfaction in the MyIndihome application,
- H2: System quality affects user satisfaction in the MyIndihome application,
- H3: Service quality affects user satisfaction in the MyIndihome application,
- H4: Ease of use affects user satisfaction in the MyIndihome application,
- H5: Usefulness affects user satisfaction in the MyIndihome application,
- H6: Chatbot effectiveness affects user satisfaction in the MyIndihome application.

A. Sample and Data Collection

The population of the research is all MyIndihome users in Indonesia. The total number of users in Indonesia is 5 million. Determination of the number of samples is carried out by the Slovin method. With a population of 5 million, the total number of respondents who participate in the research is 417. The determination of the number of respondents is obtained using the Slovin method. In the research,

TABLE II
RESPONDENTS’ PROFILE.

Respondents’ Profile	Total	Percentage (%)
Gender		
Male	190	45.60
Female	227	54.40
Age		
< 20	91	21.80
21–30	198	47.50
31–40	56	13.40
41–50	45	10.80
> 50	27	6.50
Education		
Junior High School	5	1.20
Senior High School	132	31.65
Diploma Degree	62	14.85
Bachelor Degree	169	40.50
Master/Doctoral Degree	49	11.80

Data collection is done using a questionnaire, and the sampling technique is random by distributing it to the MyIndihome application users. Questionnaires are distributed using electronic media.

Respondents’ profiles can be seen in Table II. The results from the respondents’ profiles show that there are more female than male users. However, the numbers are not significant. Based on age, most of them are 21 to 30 years old, with 47.5%. Next, for the level of education, the majority have a bachelor’s degree, with 40.5%.

B. Variables and Indicators

The research aims to measure the relationship between information quality, system quality, service quality, ease of use, usefulness, and chatbot effectiveness as independent variables on user satisfaction as the dependent variable. Each variable has several indicators used as a basis for a questionnaire distributed to respondents. The indicators used are listed in Table III.

As a new variable, chatbot effectiveness is based on the number of complaints that have been collected through the Google Play Store, App Store, and interviews with users of the MyIndihome application. As shown in Table I, there are various kinds of problems experienced by MyIndihome application users, such as difficulty in verification and changing email addresses and cell phone numbers and slow Internet. These complaints can be solved by utilizing the chatbot feature provided in the MyIndihome application. These complaints can become the basis for indicators of the chatbot effectiveness.

C. Data Analysis

Data processing uses the Structural Equation Modeling (SEM) method with SmartPLS 3.0 software.

TABLE III
RESEARCH INDICATORS.

Variable	Indicators	Code	References
Information Quality	Accuracy	IQ1	[14]
	Providing detail information	IQ2	[14]
	Appropriate format	IQ3	[14]
	Provided information is consistent	IQ4	[14]
System Quality	Security for transactions	SYS1	[18]
	No errors and bugs	SYS2	[18, 28]
	Application system is stable	SYS3	[10]
	Each menu is well integrated	SYS4	[19]
Service Quality	High service quality	SERV1	[18]
	Users feel that the application is always available	SERV2	[10]
	Facility to contact helpdesk	SERV3	[10]
Ease of Use	Easy to operate	EU1	[20]
	User interaction	EU2	[20]
	Flexible to use (anywhere and anytime)	EU3	[20]
	User expectations	EU4	[20]
Usefulness	Saving time	USE1	[7]
	Saving cost	USE2	[7]
	Being helpful	USE3	[20]
Chatbot Effectiveness	Providing quick response	CE1	New variables and indicators
	Helping problems	CE2	
	Providing guidance	CE3	
User Satisfaction	Expected function	SAT1	[8]
	Recommending it to relative	SAT2	[8]
	Satisfied with MyIndihome application	SAT3	[8]

After getting data from the questionnaire, the data are analyzed using SmartPLS software. Hence, the results of the validity and reliability of the data can be seen. If all data are valid and reliable, a hypothesis test with SEM analysis can be carried out to conclude the research results.

III. RESULTS AND DISCUSSION

A. Measurement Model (Outer Model)

The measurement model (outer model) tests the validity using convergent and discriminant validity. The validity test shows the extent to which a research instrument is valid or invalid, with a significant level of 5% [29]. The validity test is assisted by the SmartPLS program using the Partial Least Square (PLS) algorithm method. The results of SmartPLS processing for validity testing are based on the loading factor.

The convergent validity is done by looking at the loading factor value of each indicator. The acceptable factor loading value is more than 0.5. It is considered good for an indicator when it is equal to 0.7 and above [30]. The results of the convergent validity test

TABLE IV
OUTER LOADING VALUE IN CONVERGENT VALIDITY TEST RESULTS.

Variable	Indicators	Loading Factor
Information Quality	IQ1	0.893
	IQ2	0.849
	IQ3	0.801
	IQ4	0.858
System Quality	SYS1	0.818
	SYS2	0.827
	SYS3	0.824
	SYS4	0.751
Service Quality	SERV1	0.925
	SERV2	0.907
	SERV3	0.904
Ease of Use	EU1	0.905
	EU2	0.897
	EU3	0.901
	EU4	0.896
Usefulness	USE1	0.947
	USE2	0.949
	USE3	0.927
Chatbot Effectiveness	CE1	0.921
	CE2	0.946
	CE3	0.930
User Satisfaction	SAT1	0.932
	SAT2	0.919
	SAT3	0.889

are in Table IV. It shows that the factor loading value of each indicator has met the requirements of being bigger than 0.7. Hence, the results are considered good.

Discriminant validity looks at the cross-loading value of the construct measurement. The cross-loading value shows the correlation magnitude between each construct and its indicators and indicators with other constructs. A measurement model has good discriminant validity if the correlation between the construct and its indicators is higher than the correlation with indicators from other constructs [30].

Discriminant validity is known by looking at the Average Variance Extracted (AVE) value. A good AVE value requires more than 0.5. The results of the AVE value of each construct are described in Table V in which each variable has a bigger AVE value than 0.5. Thus, the research model has good discriminant validity.

Next, the reliability test is used to determine whether the indicators used can be trusted as a measuring instrument or not. The indicator is declared reliable if Cronbach’s alpha (α) value obtained is 0.70 [30]. The results of the reliability test carried out using the SmartPLS program can be seen in Table VI. The value of Cronbach’s alpha of all variables is greater than 0.70. Hence, the variables are reliable. They can be trusted as measuring instruments.

TABLE V
DISCRIMINANT VALIDITY RESULTS WITH AVERAGE VARIANCE EXTRACTED (AVE).

Variable	Average Variance Extracted (AVE) Value	Description
Chatbot Effectiveness	0.869	Valid
Ease of Use	0.810	Valid
Information Quality	0.724	Valid
Service Quality	0.832	Valid
System Quality	0.649	Valid
Usefulness	0.885	Valid
User Satisfaction	0.835	Valid

TABLE VI
RELIABILITY TEST RESULTS.

Variable	Cronbach’s Alpha	Cut Point	Description
Information Quality	0.923	0.7	Reliable
System Quality	0.904	0.7	Reliable
Service Quality	0.899	0.7	Reliable
Ease of Use	0.922	0.7	Reliable
Usefulness	0.935	0.7	Reliable
Chatbot Effectiveness	0.925	0.7	Reliable
User Satisfaction	0.928	0.7	Reliable

TABLE VII
PATH COEFFICIENT RESULTS.

Hypothesis	Path Coefficient
Information Quality → User Satisfaction	0.115
System Quality → User Satisfaction	0.141
Service Quality → User Satisfaction	0.020
Ease of Use → User Satisfaction	0.238
Usefulness → User Satisfaction	0.171
Chatbot Effectiveness → User Satisfaction	0.284

B. Structural Model (Inner Model)

The evaluation of the inner model is done by looking at the coefficient of determination (R-square) results for each construct and the significance value of the path coefficient. R-square (R^2) is also the coefficient of determination which explains how much the independent variable influences the percentage of the dependent variable. Based on the R^2 criteria, user satisfaction has an R^2 value of 0.790 or 79%. It means that user satisfaction is influenced by the independent variable by 79%. The rest, which is 21%, are influenced by other factors that are not included in the research.

The path coefficient determines how much influence the independent variables have on the dependent variable. Path coefficient results can be seen in Table VII. From the regression equation results, the order of effect on user satisfaction sorted from high to low influence is chatbot effectiveness, ease of use, usefulness, system quality, information quality, and service quality.

Then, testing hypothesis uses the SEM-PLS analysis method. It is done to determine the significance of the variables and see the effects on the hypothesis.

TABLE VIII
HYPOTHESIS TESTING RESULTS BASED ON P-VALUES.

Hypothesis	T-statistic	P-Value	Description
Information Quality → User Satisfaction	2.243	0.025	H1 is accepted
System Quality → User Satisfaction	2.619	0.009	H2 is accepted
Service Quality → User Satisfaction	0.375	0.708	H3 is rejected
Ease of Use → User Satisfaction	3.078	0.002	H4 is accepted
Usefulness → User Satisfaction	2.287	0.023	H5 is accepted
Chatbot Effectiveness → User Satisfaction	4.994	0.000	H6 is accepted

Hypothesis testing is conducted by looking at the p-values. The research hypothesis can be accepted if the p-value result is smaller than 0.05 [31]. The results of the processing can be seen in Table VIII.

Based on Table VIII, the p-value is 0.025. It shows that the result of the p-value is less than 0.05. Thus, H1 is accepted. It means that the information quality has a significant influence on user satisfaction with the MyIndihome application. The results are in accordance with previous research that information quality has a positive and significant effect on user satisfaction with NPS to solve and evaluate patient problems [27]. Then, the research also has the same results as the previous research that information quality has a positive and significant effect on user satisfaction in Healthcare Information Systems (HIS) [8].

Furthermore, in H2, the p-value is 0.009. It shows that the p-value is less than 0.05. Thus, H2 is accepted. The system quality has a significant influence on user satisfaction with the MyIndihome application. The results are in accordance with previous studies that system quality has a positive and significant effect on user satisfaction in NPS [27] and Healthcare Information Systems (HIS) [8].

H3 is about the effect of service quality on user satisfaction. The p-value is 0.708, which is greater than 0.05. Thus, H3 is rejected. The service quality does not significantly affect user satisfaction with the MyIndihome application. The results are due to various things, such as users' preferences for the MyIndihome application. Additionally, the results have similarities with previous research [32].

In H4, the p-value is 0.002, which is less than 0.05. Thus, H4 is accepted. The ease of use has a significant influence on user satisfaction with the MyIndihome application. These results are in accordance with research conducted in Learning Management System (LMS) that ease of use has a positive and significant effect on user satisfaction [20].

In H5, the p-value is 0.023. Hence, H5 is accepted. The usefulness has a significant influence on user satisfaction with the MyIndihome application. These results are in accordance with previous research that usefulness has a positive and significant effect on user

satisfaction in the attendance system at Diponegoro University [24].

H6 states the effect of the effectiveness of the chatbot on user satisfaction. The result of the p-value is 0.000. Thus, H6 is accepted. The chatbot effectiveness significantly affects user satisfaction with the MyIndihome application. Based on previous research, no similar research has examined the relationship between chatbot effectiveness and user satisfaction. Thus, the results of the chatbot effectiveness are new in the research.

C. Managerial Implication

From a practical perspective, the research results provide managerial implications for companies regarding the Internet provider company application as a self-service application. It is also a form of management for company and customer relationships. Identification of various obstacles/problems faced so far can be used as a reference for improvements to the quality of the Internet application provider in the future. Based on the research results, the higher the values of information quality, system quality, ease of use, usefulness, and chatbot effectiveness are, the higher the variables affect the user satisfaction of the MyIndihome application.

Based on the research results, it can provide recommendations to the company. First, information quality affects user satisfaction with the MyIndihome application. The company must pay attention to the accuracy of the information regarding the estimated report completion of the MyIndihome application user. For example, if the information in the MyIndihome application states that the estimated repair work is within three days, it must be completed in three days or before three days. Then, the company must make an application that provides detailed information regarding the package used by the customers because sometimes the package does not change immediately after the customer changes the package. In addition, the company must also improve the features in the MyIndihome application so that it continues to follow Indihome users' needs. Additionally, the company must improve the consistency of the billing information in the MyIndihome application. Usually, after the customers change

the package or make a billing complaint, the bill listed in the MyIndihome application does not automatically adjust to the actual customer bill.

Second, for system quality, the company must maintain security in the MyIndihome application because users may fear their data being misused. Then, the company must improve the MyIndihome application system so it is not too 'heavy'. So the application will be more stable, and bugs or errors do not often occur. MyIndihome application customers complain that bugs and errors often occur because the application is too heavy. Next, the integration in the system must be better because users often find it challenging to log in even though the listed email and cellphone numbers are correct.

Third, in ease of use, the company must improve the available facilities in the MyIndihome application to access features with a more user-friendly design so that various groups and users can use it feel more interactive using the MyIndihome application. Additionally, the company must maintain the MyIndihome application so it can be used everywhere and any time so that users can more easily control their Indihome subscriptions. It is because Indihome users do not always stand by at the place where their Indihome is installed.

Fourth, for its usefulness, the company must carry on a policy for maintaining the MyIndihome application so that it is even better by paying more attention to usability for its users. It has proven to be beneficial for its users regarding cost and time. With the MyIndihome application, Indihome users do not need time and money to come to Plaza Telkom.

Last, for chatbot effectiveness, the company must improve the chatbot to respond in real time because users need the answers immediately. The chatbot can be maintained to help update data, such as cell phone numbers and email addresses, because users often have trouble changing their cell phone numbers and emails. Then, the company increases the chatbot vocabulary and sentences so the answers given to MyIndihome application users can be more relevant and provide the proper guidelines according to what they need.

IV. CONCLUSION

Based on the research, the results indicate the factors that affect the user satisfaction of the MyIndihome application. Of the six proposed hypotheses, only five hypotheses are accepted. It shows that the information quality, system quality, ease of use, usefulness, and chatbot effectiveness affect user satisfaction with the MyIndihome application. However, the service quality variable does not affect user satisfaction with the MyIndihome application.

These results can help the company to increase user satisfaction with the MyIndihome application by making the research one of the theoretical and evaluation foundations. Then, it can continue to develop and implement strategies to increase competitiveness against competitors. It is essential for the company because the MyIndihome application offers various conveniences for its customers, and the MyIndihome application can be said to be one of the company's main pillars in managing customer relationships.

Nevertheless, the research also has limitations. First, only 417 respondents are taken from all MyIndihome application users in Indonesia from around five million application users. Although the specified number has a basic calculation, it will be better if future research can use more respondents so that the results are more representative. Second, the sampling is done randomly. The sample data do not detect a comparison of the number between old and new users of the MyIndihome application. If the number of samples is balanced between old and new users, the data will be more representative because the experience obtained by old and new users will differ. In future research, the researchers can balance the sample between old and new users so that the data obtained will be more representative.

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