Usability and Quality Information in pedulisehat.id CRM using Chatbot

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Abstract: Usability and quality information has an important role in a website. To measure the use and quality of the information this research carries out on the pedulisehat website. Customer Relationship Management (CRM) uses chatbot. The variables used in this study are information quality and chatbot usage services. The results showed good results on the pedulisehat.id chatbot website, from the data collected produced two variable quality information with a yield of 77.8% and usability with a result of 63.1%. There is still a need to improve the quality of information and the use of the pedulisehat.id website.

Keywords: Information, Usability, Quality, Website, Chatbot.

I. INTRODUCTION

Competition in the business world today is growing rapidly, followed by the development of the world of information and communication technology. This led the competition trying to continue to improve their capabilities and excellence by mobilizing all the potentials [1]. In a website, by studying user behavior and user desires, it is hoped that companies can take appropriate steps to improve service to users, increase user loyalty. Improved service to users can be done in several ways including providing information that is fast, accurate, has a broad reach, and provides services to users.

Peduli Sehat Gotong Royong Foundation is a foundation that offers services to the healthcare fund raising fundraising concept spread through social media. Focusing on patients suffering from chronic illnesses who do not have sufficient funds to care, treatment, special milk for infants and patients, health supporting medical devices). With Peduli Sehat

Gotong Royong Foundation can help patients and the public who wish to make donations to patients in need. The number of donors who have many questions due to lack of information when using the application of Peduli Sehat Gotong Royong Foundation (Pedulisehat.id).

To meet the needs of donors, we need an information system that applies the Customer Relationship Management (CRM) method. CRM is a strategy the company used to pamper its customers to not turn to a competitor [2]. In implementing Customer Relationship Management in Peduli Sehat Gotong Royong Foundation to help by providing more interaction to the donors.

Customer Relationship Management (CRM) is a strategy to acquire, analyze data, to then be used to interact with donors, thus creating a comprehensive view and a better relationship with the donor [3]. To maximize the use of information on the Gotong Royong Healthy Care Foundation website (pedulisehat.id) providing services that can help provide information, the services provided are based on Chatbot so that they are expected to be able to provide fast and accurate information.

The services in question such as communication between the donor and the foundation to facilitate donors when using the Peduli Sehat Gotong Royong Foundation application because chatbot is a computer program designed to simulate intellectual conversation with one or more humans both audio and text.

Chatbot concept has been well known and widely implemented to improve service in the company. From the description above, the authors are interested in raising the issue into a report with the title "Usability and Quality information in pedulisehat.id CRM Using Chatbot".

II. LITERATURE REVIEW

A. Information Quality

The success of IS (Information System) is widely recognized by practitioners and academics as a concept that is difficult to define even many studies have tried to explain and justify the results of evaluating the success of IS. IS certainly has many stakeholders, each stakeholder defines the success of different systems. IS development projects have been plagued by swelling budgets and users are not fulfilled the requirements [4]. Thus, from an IS developer perspective, a successful IS is one that is completed on time and under budget, with a complete set of features that are consistent with their specifications and functions correctly. One indicator of the success of this information system is the quality of information.

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Data and Information Quality is generally considered a multi-dimensional concept [5] with various characteristics that are linked depending on the author's perspective. Most commonly, the term "Data Quality" is described as data that is "Suitable for use" [6], which implies that it is relative, because data deemed appropriate for one use may not have sufficient attributes for other uses [7].

To define and measure the concept of information quality accurately, it is not enough just to identify indicators that have been applied by several individuals. In fact the quality of information needs to be assessed in the context in accordance with the information provided and the intent of users who need it, because data quality indicators can vary depends on the context in which the data will be used [8].

B. Usability

Usage is a measure of the quality of the user experience by interacting with something whether it's a website, a traditional software application or any device that the user can operate in a certain way [9]. According to Nielsen, usage is one of the most important aspects of web design, but often the most overlooked. Many web usability problems can arise due to variations in user behavior and culture, the variation can be found in colors, graphics, phrases, icons, character sets, pictures, symbols, date format and time and so on [10]. Nielsen defines there are 5 attributes in use, namely learnability, efficiency, memorability, errors, satisfaction.

C. Chatbot

The word "chatbot" consists of the terms "chat" and "robot". Initially, the term chatbot was used for computer programs, which simulated human language with the help of a text-based dialogue system. Chatbot contains text input and results in the form of a mask, which allows mobile users to communicate with the software behind it, giving them the experience of chatting with real people [9]. Chatbot makes it more efficient and helps businesses provide CRM services to their customers or clients in providing information through real-timechat.

D. Customer Relationship Management

CRM as the main business strategy in a company regarding internal functions to create and realize added value for customers [10]. CRM is a combination of strategy, process, and technological change, where a company becomes better at managing its own company around customer information [11]. So it can be concluded that CRM is an integrated information system between technology, people, markets, business models, and management that is designed, scheduled and regulates interaction activities with customers or prospective customers.

III. RESARTCH METHODE

This study aims to analyze Chatbot on pedulisehat.id, whether this chatbot has a positive impact after being applied to the pedulisehat.id website. This chatbot is in every module because of its widget (widget is a small application to display information or to interact with the user). This widget is divided into 2 Tabs, the first tab is Chat and the second tab is FAQ. In the first tab the user is given 2 options. The first option or donation cares, users can interact with chatbot to provide information about donations. In the second option or fundraiser, users can interact with chatbot for how to be able to make donations.

The second tab, or FAQ, will display the FAQ categories provided, there are how to create a fundraising page, how to donate online, constraints in donating and others. Each category has questions that are often asked by donors. Donors can also search for keywords or questions by searching by entering the desired keywords. The following is the chat tab widget view (Fig. 1 and FAQ tabFig.2).
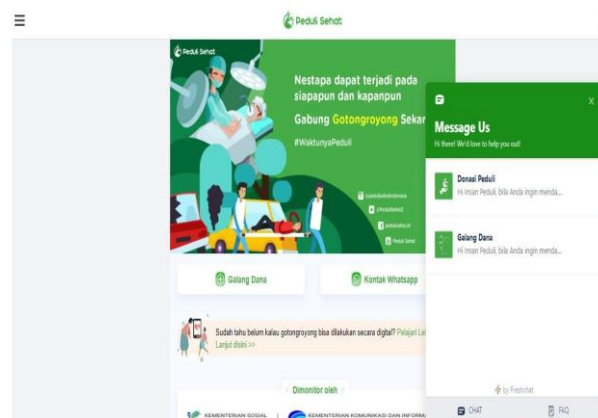

Fig. 1.Tab Chat

Fig. 2.Tab FAQ

A. Questionnaire

After the making of questionnaires and questionnaires using the Google form to the user and relative in its assessment in no pedulisehat.id chatbot as many as 64 respondents.

The design of the questionnaire aims to find each of the variables, indicators and questions that will be given to the respondent's perceptions of each respondent in the use of the website pedulisehat.id.

Table- I: Variable and Indicator

Variable	Indicator	Question
Quality Information	Completeness(IIQ1)	I got the information I was looking for on the pedulisehat.id website
	Relevant(IIQ2)	The information that I got on the pedulisehat.id website is accordancing with my needs
	Accuracy(IIQ3)	The information that I got on the pedulisehat.id website is not ambiguous and there are no mistake
	Maintainability(IIQ4)	I always get the latest information from the pedulisehat.id website
	Presenting Information(IIQ5)	I easily understand the information provided by the pedulisehat.id website
Usability	Frequency to use (IU1 & IU2)	Within a week I often access the pedulisehat.id website
		Within a week I often use the chatbot application on the pedulisehat.id website
	Information Satisfaction (IU3 & IU4)	I am satisfied in using the chatbot application on the pedulisehat.id website

Note :   IIQ – Indicator Information Quality

IU – Indicator Usability

The questionnaire uses a modified Likert Scale by eliminating the middle choice, to measure the attitudes, opinions, and perceptions of users as respondents. Likert scale is also used to create a structured questionnaire with many forms of choice. For analysis purposes the answers were given a score: Strongly Agree (SA = 4), Agree (A = 3), Disagree (TS = 2), Strongly disagree (SD = 1).

Table – 2: Scala Likert

Statement	Alias	Score
Strongly Agree	SA	4
Agree	A	3
Disagree	D	2
Strongly Disagree	SD	1

IV.   RESULT ANDDISCUSSION

A. Data Collection

The types of work of respondents are 37.5% working as private employees, followed by 21.9% working as entrepreneurs, followed by 12.5% as students, followed by 7.8% working as civil servants, and 20.3% other jobs. With the most vulnerable age at 39.1% at the age of 15-25 years. To detail can be seen in Table-3.

Table – 3: Total Respondent

Jobs	Total Respondent	Percentage
Employee	24	37.5%
Entrepreneur	14	21.9%
Student	8	12.5%
Civil Servant	5	7.8%
Others	13	20.3%
Total	64	100%

The results of this analysis test using the Crosstab technique for descriptive analysis that a method relating to the collection, summarization, and presentation of data so that it provides useful information and also organizes it into a form that is ready to be analyzed (Jacobs, 2010). Thus, this descriptive statistics is the phase that explains the elaboration and presentation of data. Table 4, shows the results of descriptive analysis on the evaluation of the chatbot yayasan pedulisehat gotong royong (pedulisehat.id) system.

Table – 4: Results of Questionnaire for Each Variable

Variable	Indicator	SD	D	A	SA	Total
Quality Information `	IIQ1	3	5	36	20	64
	IIQ2	2	8	35	19	64
	IIQ3	2	7	36	19	64
	IIQ4	1	12	39	12	64
	IIQ5	1	5	37	21	64
Usability	IU1	25	24	14	1	64
	IU2	23	31	9	1	64
	IU3	1	4	39	20	64
	IU4	1	4	40	19	64

Based on table 4, the highest number of scores for SD is 1x64=64, while the SA is 4x64= 256. Weights are calculated based on each respondent's value multiplied by the likert scale. Thus, the formula percentage (%) = weight / SD x 100. The results of evaluation of the chatbot yayasan pedulisehat gotong royong (pedulisehat.id) system is determined based on the percentage index table 5.

Table – 5: The Percentage Index

The results of Evaluation	Percentage Index
Very Less	0% - 25%
Less	26% - 50%
Good	51% - 75%
Very Good	76% - 100%

Table 6 shows the responses of respondents to questions related to the information quality variable. Information Quality Conditions generated from the chatbot yayasan pedulisehat gotong royong (pedulisehat.id) is included in the good category. This was proven by 77.8% of use of chatbot answering in agreement, meaning that most use of chatbot felt the information quality generated by the chatbot yayasan pedulisehat gotong royong (pedulisehat.id) application was quite consistent.

While 22.2% answered disagreed or mediocre about the information quality.

Table – 6: Responses of Respondents to Questions Related to the Information Quality

Symbol	T.SD	T.D	T.A	T.SA	Weights	%
IIQ1	3	10	108	80	201	78,5
PQI2	2	16	105	76	199	77,7
PQI3	2	14	108	76	200	78,1
PQI4	1	24	117	48	190	74,2
PQI5	1	10	111	84	206	80,5
Total						77,8

Table 7 shows the responses of respondents to questions related to the usability variable. Usability conditions generated from the chatbot yayasan pedulisehat gotong royong (pedulisehat.id) system is included in the good category. This was proven by 63.1% of employees answering in agreement, meaning that most use of chatbot felt the usability generated by the chatbot yayasan pedulisehat gotong royong (pedulisehat.id) application was quite consistent. While 36.9% answered disagreed or mediocre about the usability.

Table – 7: Responses of Respondents to Questions Related to the System Quality

Symbol	T.SD	T.D	T.A	T.SA	Weights	%
IU1	25	48	42	4	119	46,5
IU2	24	62	27	4	116	45,3
IU3	1	8	117	80	206	80,5
IU4	1	8	120	76	205	80,1
Total						63,1

V. CONCLUSION

Quality information and usability condition of the chatbot on pedulisehat.id websites system is in good condition base on data in result show that value soft hose two variables is equals 77,8% for quality information and 63.1% for usability variable, To improve the quality of information, it must be ensured that the information generated from the updated time of information that make information on chatbot is always up to date, increases the accuracy of the information base on visitors data, produces clear information, keeps information easily understood, and maintains the completeness of information in accordance with the agreement. Meanwhile, to improve the usability variable of the system requires a disseminating information about pedulisehat.id themselves, it is necessary to make a better visitors to visit the web and use that chatbot for asking something information that is easy to use, increase user confidence in the system, and improve system security. It is also necessary to support technology that is reliable and in accordance with needs.

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