

Implementation of Usability Methods in Customer Service Information System (Case Study: Website PDAM Tirta Musi Palembang)

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Abstract

Usability is derived from the word usable which generally means it can be used with either. Basic measure of usability include: Learnability, efficiency, memorability, errors and satisfaction. PDAM Tirta Musi Palembang has a website that is www.tirtamusu.com, and have not evaluated the extent to which the site useful (usable), to provide information and services to customer satisfaction. The method can be used to evaluate the usability of the website. In the process of website evaluation, usability testing can support applications that use Techsmith Morae Recorder. Morae provides functions to help the practitioner uses in planning, testing, data analysis and reporting of results. From the research it can be seen that website Musi Palembang PDAM Tirta not meet the level of satisfaction. Where the need for additional menu information Phone and Address Complete Information Company, Information Services Unit, Site Map and searching. Research using usability is expected to provide an assessment for the development of the website so that it can be useful and provide satisfaction to customers.

Keywords : *Usability , Website , Evaluation , and Morae recorder*

1 INTRODUCTION

Regional Water Company (PDAM) Tirta Musi Palembang is a provincial enterprises (enterprises) that provide water services in the city of Palembang . At this time PDAM Tirta Musi Palembang already has five customer service unit to serve people who want to subscribe to fresh water in each unit of each region. For example Sako Kenten Services Unit to serve the distribution of clean water and the surrounding area Kenten . Each unit has a full-time employees and assisted with outsourced employees will serve customers needs for clean water , then from the PDAM Tirta Musi Palembang obliged to improve its service to the people of Palembang city water customers in particular by adopting a satisfactory service for prospective customers and corporate customers to find out all the information about the



Figure 1: Website PDAM Tirta Musi Palembang

services provided by the company. Therefore we need a system that is fast and accurate service to the company manajemen in taking decisions quickly and accurately in order to improve customer service. This is implemented by developing a customer information system online through the website PDAM Tirta Musi Palembang. Every customer can check the water distribution disruption information and information water bill that has used online. However, since the development of online customer service information using PDAM Tirta Musi Palembang websites are used by customers, until now the PDAM Tirta Musi Palembang yet to evaluate the extent to which the site useful (usability) to provide information and services to the satisfaction of the public, especially customers of PDAM Tirta Palembang Musi.

PDAM Tirta Musi Palembang website is built using ASP (Active Server Pages) and a MySQL database. On the website there Palembang PDAM Tirta Musi link (link) Information Services Unit , Water Bill , Water Meter Stand and mode of payment using ATM and E - Banking. As we know that the development of a website to go through some usability guidelines to ensure that the purpose of the website is intended to be achieved. Therefore, it must be evaluated usability of a website that serves the needs of users . However, we often find on a website often influenced by factors of technology and business goals , not by the needs of the user . Usability as the degree to which a product can be used by specified users to achieve specified goals effectively, efficiently and gain satisfaction in the context of its use . Basic measure of usability include: Learnability, efficiency, memorability, errors and satisfaction. Usability is derived from the word usable which generally means it can be used with either. Something can be said to be useful if the failure to properly use can be eliminated or at minimize and provide benefit and satisfaction to the user (Rubin and Chisnell, 2008). According to the International Standard Organization (ISO 9241 : 11, 1998) Usability is the extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and achieve satisfaction in a specific context of use.

Identification of Problems is Website PDAM Tirta Musi Palembang after being published to customers has never been evaluated, for it to be evaluated using the methods of Usability Testing website.

This study took the object that is the website PDAM Tirta Musi Palembang. To evaluate website usability methods include learnability, efficiency, memorability, errors and satisfaction

to customers PDAM Tirta Musi Palembang.

Based on the background of the problems described above, the issues to be discussed are: How do I evaluate the use of the website PDAM Tirta Musi Palembang by using usability?.

The purpose of this study was to evaluate website usability method that is expected will give you enter the development process of service to the community and especially the customers PDAM Tirta Musi Palembang.

The benefits of this research are the public and in particular the customer can access the website PDAM Tirta Musi Palembang efficiently and gain customer satisfaction in the service information.

2 RESEARCH METHODOLOGY

The method used in this study is a survey method . In survey research, the information collected from the respondents that the data collected from the sample over the population to represent the population . The method can be used in the evaluation survey to collect data from a sample by using a data collection instrument, namely observation and interviews so that the data processing may represent a relatively large population numbers (Sudjana, 2006). In this research, the process of recording video and images directly to the respondents, employees and customers of PDAM Tirta Musi Palembang. The results of this record which will be used as data sources or as the primary data as obtained directly from the original source (not through an intermediary medium) . Primary data can be subject opinion (people) individually or in groups, the observation of an object (physical), event or activity, and test results.

2.1 Research Sites

Future research by the author from October 2013 to January 2014 in PDAM Tirta Musi Palembang.

2.2 Framework

The framework is designed to solve research problems encountered in this study. In this study, the first step taken is to analyze the problem, followed by the beginning of the study, the study of literature / literature related to usability testing (usability testing) and also a study of the object to be observed, in this case the website PDAM Tirta Musi Palembang . The framework can be seen in the Figure 2.

3 RESULTS AND DISCUSSION

3.1 Criteria for good Website

Website which is also called the Web or the homepage is the location or address on the Internet , which consists of the files and the files are stored in different computers called servers (Pardosi , 2005) . Website or the world wide web (www) is a collection of web pages that contain information (Yuhefizar , 2008). Website is a medium conveys information on the internet (Jovan, 2007). So it can be concluded that the website is a way to present yourself both individuals and companies on the internet, anyone in the world can visit it, whenever they can find out about the profile, giving questions , provide feedback or even to know and

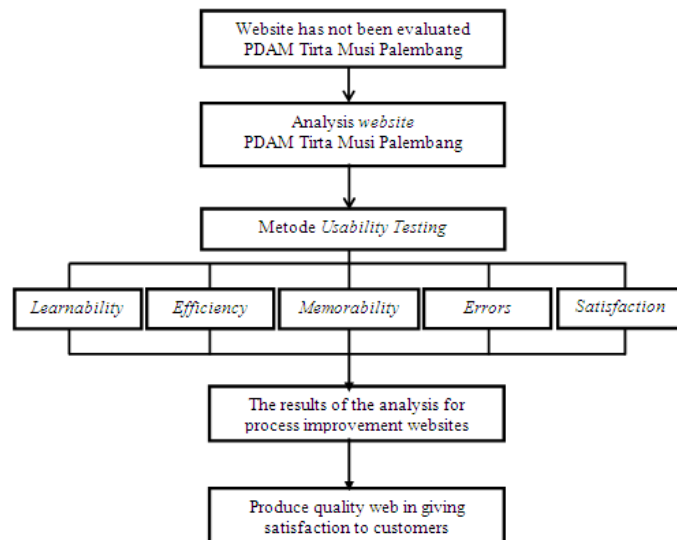


Figure 2: Framework

buy products that are available on the website . User in using the website should effectively (Jacob Nielsen, 1993). In designing a good website , must consider the following factors :

- The navigation system.
- Navigation is easily understood by the visitors as a whole.
- Graphic Design.

The selection of graphics , layout , color , form and visually appealing typografi visitors to explore the website :

1. Content

Contents / useful content (' Content is king , but without good design , Content is a naked king '), unless the website is an experimental website / show off;

2. Compatibility

How widespread a website supported compatibility of existing equipment , such as browser plug-ins with his various (IE , Mozilla , Opera , Netscape , Lynx , Avant , Maxthon and many more with its various versions and plugins);

3. Loading time

Call time (loading time) , although there are many factors which will affect the time to call (loading time) that the website will be open , including : a large bandwidth / connection accessor , conditions webserver when accessed , the application used to build websites . You have the first 8 seconds to convince a visitor to continue exploring your website or close the browser and go to another website . Therefore , put something in the first 8 seconds that can attract the attention of visitors ;



Figure 3: Techsmith Morae Recorder

4. Functionality

It will involve the programmer to script - script , eg HP , ASP , Java , CGI , etc . , to create a website that is dynamic, interactive and life could invite visitors to communicate directly . How well a website work from its technological aspects .

3.2 Usability Testing

Usability is critical to the sustainability of a website . If a website is difficult to use then the user will not even go to visit the website. If a website fails to provide an explanation or information difficult to understand , the bid can not be made through the site , people will not visit the website . Usability Testing which in Indonesian is called the interoperability test . Usefulness or usability is a term that indicates the ease of a man to use a tool or other human -made object to reach certain goals . According Badre (2002) suggested that gives the definition of Usability Testing or interoperability testing as follows , ” Usability Testing has traditionally meant testing for efficiency , ease of learning , and the ability to remember how to perform interactive Tasks without difficulty or errors . ” In other words , interoperability testing is a measure of efficiency , ease of study , and the ability to remember how to interact without difficulty or error . Further it is said , interoperability testing conducted to measure how users use the system and the problems he encountered.

3.3 Results of Research

In a study conducted by the authors , namely by way of doing a video and picture recording process that can see the facial reactions and comments from respondents directly . The recording process is intended to determine the extent of information systems (website) PDAM Tirta Musi useful both for employees or customers of PDAM Tirta Musi Palembang . The recording involves respondents consisting of :

1. Employee / employee PDAM Tirta Musi 1 (one) person ;
2. Customers PDAM Tirta Musi 3 (three) persons.

The recording process of the respondents performed using Techsmith Morae Recorder software in accordance with the guidelines contained in the special website for Usability testing (www.usability.gov) . According to Nitish Eels (2010) Morae Recorder is a software utility that allows practitioners to perform various activities that are usually involved in a conventional laboratory-based usability testing . Morae provides functionality to assist the practitioner uses in planning , testing , data analysis and reporting of results . It is developed by Techsmith and can be used on Windows operating systems.

3.4 Task-Task Usability Testing

Each task in the above can be explained as follows:

1. Task 1.

User / customer to open a website PDAM Tirta Musi Palembang using a browser, such as Mozilla Firefox, Internet Explorer and Google Chrome;

2. Task 2.

Users / customers to search for information on the Service Unit PDAM Tirta Musi Palembang;

3. Task 3.

Users / customers do a search for the Water Bill, by entering No.. Customers and No. Id. Customer Unit, to determine the cost to be paid;

4. Task 4.

User / customer to search information about how to read Water Meter Stand, knowing sebarapa remedy that has been used a great usage per month.

5. Task 5. User / customer to search information about Payment using ATM & E-Banking, Bank list of what has been working with the PDAM Tirta Musi Palembang.

From the results of the questionnaire that was submitted to the respondents, the results obtained as the Table 1

The average value of the total respondents

- 23.07 % stated Not Satisfied ;
- 15.38 % stated Satisfied ;
- 61.53 % said Very Satisfied

When viewed from the average value is expressed Very Satisfied as many as 61.53 % and of the table. Range value declared value 61-80 Qualified it can be concluded that the website PDAM Tirta Musi Palembang is a quality website.

- Access Speed

Based on the questionnaire question that has been given to the respondents to Access Speed (Free Access) website Musi Palembang PDAM Tirta 4 (four) questions, all respondents stated Satisfied - Very Satisfied. It is claimed that the speed of access to the website PDAM Tirta Musi Palembang , already meet the level of satisfaction (satisfaction) customers.

Table 1: Results of Questionnaire Respondents

Responden	Hasil (%)		
	Tidak Puas	Puas	Sangat Puas
Responden 1	23,07	17,94	58,97
Responden 2	23,07	20,51	56,41
Responden 3	23,07	12,82	64,10
Responden 4	23,07	10,25	66,66
Rata-rata	23,07	15,38	61,53

- Ease Of Case

Respondents were given a question as much as seven (7) questions. All respondents stated Satisfied - Very Satisfied, so it can be concluded that the PDAM Tirta Musi Palembang website is easy to use for anyone who access it.

- Content

To the content (website content), respondents are given a question as much as 11 (eleven) questions. From the list of questions asked of all respondents expressed dissatisfaction, due to the unavailability of information :

- Company Telephone Number.
- Corporate Office Address.
- Email the webmaster.
- Guest Book (Guest Book).

Therefore the answer to the dissatisfaction of the respondents, necessary repairs and additions to the menu desired by the respondents on the website PDAM Tirta Musi Palembang .

- Design (Web Design)

The question posed to the respondents as much as 9 (nine) questions . Respondents stated Satisfied - Very Satisfied to web design PDAM Tirta Musi Palembang . There are no animations , as well as ads in website design PDAM Tirta Musi Palembang , which could interfere with the level of comfort and reduces errors in the opening of respondents link (link) the desired information.

- Navigation

Navigation on the website easier for customers to access the desired information . Respondents were given the question five (5) questions . And all the respondents expressed dissatisfaction , namely :

- Difficulty to return to the Homepage (Main Menu).
- The unavailability of the search (searching).
- The unavailability of a site map (site map).

From the results of the respondents' dissatisfaction, hence the need for the addition of such a menu button to access the main menu (Homepage), search (searching) and a site map (site map). As well as to facilitate the respondents in breadcrumbs move from one page to another.

- Responsiveness (Reaction Capability)

Of 3 (three) questions posed to the respondents, only 1 (one) a statement of the respondents expressed dissatisfaction, namely :

- Non-availability of facilities the FAQ (Frequently Asked Questions)

Hence the need for additional menu information for facilities FAQ (Frequently Asked Questions) to the respondent, in order to facilitate the respondents see the questions most often asked of the PDAM Tirta Musi Palembang.

4 CONCLUSION

- Research on Application of Usability Methods In Customer Service Information System (Case Study : Website PDAM Tirta Musi Palembang) can be concluded as follows:

1. On the menu Service Unit can not be accessed, making it difficult for customers to know the full name and address units to service at the PDAM Tirta Musi Palembang.
2. Respondents (customers PDAM Tirta Musi Palembang) found that the unavailability of the website or the information facilities to be able to access the Main Menu to quickly without having to press the back button (back) on the application of the IE browser, Mozilla and others, and Full Address Phone Number Company, search (searching), a map of the site (site map), as well as a list of information the Bank is working with PDAM Tirta Musi to enable customers to make payments using ATM and e-banking .
3. Customer Account Information menu does not show how much information (cubication) customer usage for each month.
4. There is repetition in writing on the website for a link (link) Service Unit , but still can not be accessed by the customer.
5. Judging from 5 (five) factors usability, website PDAM Tirta Musi Palembang see results with the task of recording or commands and questions posed to the respondents directly, so the website PDAM Tirta Musi Palembang has met 4 (four) of 5 (five) against user usability factors, factors that still need to be improved in terms of satisfaction (satisfaction pelangguna), with reason :
6. Lack menu that is expected by the customer and the Telephone Company Full Address, Information Services Unit, Site Map (site map), and searching. So customers difficult to obtain comprehensive information about the Union service in PDAM Tirta Musi Palembang.

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