Evaluation of Unit South Sumatra Police Mobile Brigade Website With Usability Testing Methods

Yulianingsih, Prihambodo Hendro Saksono, Ahmad Haidar Mirza

Master of Information Technology
Bina Darma University
e-mail: yulianingsih@yahoo.com

Abstract

Development of Information Technology in the media communications, of great important for the South Sumatra Police Mobile Brigade Unit. Police as a protector and patron of society in creating and maintaining the livelihood of the people concerned to be able to implement of information and communication systems that rely on the acceleration,acquire, process and take an action to improve safety conditions. Satbrimobpoldasumsel.com website accessible to the general public with ease and comfort, measure the ease of website usage needs to be evaluated in detail in terms of studied ease of studied, ease of use, satisfaction and efficiency by using a questionnaire, in order to survival and development of the website to the next site. Evaluation tool using usability testing or interoperability testing. Process of measure website usability testing method using a questionnaire to be filled by three (3) respondent made up of members of the Police (Brimob), civil police and the general public who use computer media, internet and webcam. The results showed that the percentage results of the five aspects of usability is considered good.

Keywords : *Usability , Usability Testing , Website*

1 INTRODUCTION

The evaluation is conducted to obtain complete information about the advantages and disadvantages website. Samples taken from the user population is used as respondents in usability testing, which is representative of the whole website polulasi against South Sumatra Police Mobile Brigade Unit.

Usability testing is a technique used to evaluate a product by testing it directly to the user. Usability testing is an attribute to assess how easy to use website interface. Usability is also often used to improve the ease of the user during the design process.

Ease of use (usability) website related to the scientific field of Human Computer Interaction (HCI), which is how humans as a website user interacts with the system on the website. Websites should be designed as economical as possible with the principles of human - centered

Table 1: Profil of Responden

R1	Name Responden	SUHAILI
	Work	South Sumatra Police Civil
	Age	46
	Gender	Male
R2	Name Responden	RUSNANI
	Work	South Sumatra Police Civil
	Age	45
	Gender	Female
R3	Name Responden	YONDA H
	Work	South Sumatra Police Civil
	Age	30
	Gender	Female
R4	Name Responden	MUHAMMAD NASIR
	Work	South Sumatra Police Civil
	Age	31
	Gender	Male
R5	Name Responden	HELWIDA
	Work	South Sumatra Police Civil
	Age	45
	Gender	Female
R6	Nama Responden	JEFRI
	Work	South Sumatra Police Civil
	Age	27
	Gender	Male

design, making it easier for people to use the website. All human strengths and weaknesses must be considered in designing a website in order to be usable. In addition, opinions and complaints of human beings as users of the website can also be a material consideration which can be used to improve or develop a website.

Usability is crucial to the survival of a website. If a website is difficult to use then the user will go will not even come to the site. If the homepage 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.

Design in the evaluation of this website may be explained :

1. Selecting Objects. This step is the process of determining the object to be studied is, the website of South Sumatra Police Mobile Bridge Unit.

2. Selecting Respondents, for the filling the quisionaire based on the level of active users, skilled and laity.

3. Presentad the task to the respondents, this step is to explain to the respondent that the responden was not tested, but the object of study and provide an explanation of how tof ill in the quisionaire.

4. Assign tasks to the respondents , namely giving the tasks in the questionnaire to be answered by respondents.

Table 2: Options of General Questions

No	Question	Answer
1	Could you Operate the computer?	Less
		Can
		Rather
		Lost
2	Where is your access internet ?	Office
		Home
		Warnet
		Public Place
3	What your access in internet ?	Completed Task
		Download/Upload
		Browsing / Chating
		Games
4	How long you use internet at the day?	¡ 1 Hour
		1 Hour
		2 Hour
		¿ 2 Hour
5	Never access a website www.satbrimobpoldasumsel.com	Ever
		Never
		Maybe
		Lost
6	How long do you know the website www.satbrimobpoldasumsel.com	¡ 1 year
		1 year
		2 year
		¿ 2 year
7	What is the name of the browser you use when accessing the internet?	IE
		Mozilla Firefox
		Google Chrome
		Opera

5. Completion of questionnaires from respondents , the respondents gave answers to a questionnaire in accordance with that experienced by respondents .

6. Analysis of the answers of the respondents to the website in terms of respondents' answers.

7. From the evaluation performed will get complete information about the advantages and disadvantages of current existing website using usability testing techniques.

8. The evaluation is conducted to obtain complete information about the advantages and disadvantages website.

9. Create reports of evaluation and provide recommendations.

Data analysis used in this research:

1. Computer with specs enough to run the software: Web Browser: Mozilla Firefox, Internet Explorer, Opera; Penulisanlaporan: Microsoft Office and bias runs on the Windows XP operating system.

2. Modem

3. Internet connection

4. Paper and Stationery

Each session is done from 45 to 50 minutes, because it will be difficult to focus if more of the time. The reason is usability testing method to evaluate in terms of ease of use, ease of study, efficiency and satisfaction of the Police Mobile Brigade Unit website South Sumatra. The results of the assessment of usability testing methods will provide input for the future development of the website to make it better again.

1.1 Usability Testing

Components of Usability :

1. Learnability, how easily the user can accomplish basic tasks when they see the design.

2. Efficiency, after they learn about the design, how quickly they can complete these tasks.

3. Memorability, after users no longer use the website then remember how they found the website.

4. Errors, how many mistakes are made by the users and how they correct the error. item Satisfaction looking for a design that has been made enjoyable for the user.

Phases in conducting of usability research:

1. Election questionnaire: choosing a questionnaire package that will be used. Each packet of questionnaires have certain basic assumptions, framework and approach different - different.

2. Selecting participants: participants determine reperesentatif, split by groups such as age, gender and others.

3. Determining sample size: the size of participants determines the representative to be the object of data collection.

4. Processing and interpretation of data in accordance with the characteristics of research data.

2 RESEARCH METHODOLOGY

This research take samples directly from the population. This research is causality, which aims to analyze the relationship and the influence of two or more phenomena through hypothesis testing.

Busrowi and Sukidin (2002) in Suparmo (2007:61) qualitative research is not familiar with the term random sample, sample size, extensive sampling and sampling methods. In qualitative research known as Snowballing sampling. It is also suggested by Moleong (2005) in Suparmo (2007:61) that qualitative research is no random sample, but the sample aims (purposive sampling).

Table 3: Essay Questions

No	Question	Answer
8	Do you have favorite website?	
9	Do you have email, what email the name?	
10	Do you have a social networking account, what the name account ?	
11	Do you have a computer, what the brand ?	
12	Do you like to chat, write the tools you use?	

Moleong (2005) in Suparmo (2007) qualitative research is research that utilizes open interviews to examine and understand the attitude, outlook, and behavior of an individual or group of people.

Marzuki (2002) "Purposive sampling is taking the elements that are included in the sample was done on purpose, provided that the sample is representative or representative of the population".

Sample of users (population) is taken with sample selection aims to represent the condition of the three levels of users, namely active users, users skilled and novice user. The sample is an element that is selected to represent the population in the research. The collection of data by the method of questionnaire survey conducted by distributing leaflets to direct the respondents application.

Respondents filled in a questionnaire that has been provided by giving the answer of the five aspects of usability testing. Where respondents were divided into three (3) levels of users, namely: active users, users skilled and novice user. With the separation of users is expected to represent all levels of users according to existing users. The third sample is taken two (2) persons active users, and 2 (two) persons skilled users, 2 (two) persons novice user.

Task is divided into three (3) parts:

1. Participant Selection Interview. This section is used to determine the level of respondents.

2. Test Form interoperability http://www.satbrimobpoldasumsel.com this section respondents were asked to do the work to get the information in the web site.

3. Interview In detail. This last section respondents were asked their opinions about the question (Task) are given.

The steps of data collection is done by scrip which had been prepared in advance, and in any part of the recording will be done if found to the questions from the respondents. In addition to recording each respondent questions, also done recording the response of the respondents in each activity menjawabTask given.

Simplify the documentation process and simplify the recording process. In accordance with studies done before, so to be able to obtain the primary data source, this research will use three ways:

1. Providing the questions, which the interoperability test known as task-based user, which must be answered by the participants related to the menus in the website.

2. Conducting in-depth interviews to the participants.

Table 4: Essay Questions

Task Respondent	Respon
LEARNABILITY	
1. Can you read the writing on the website http://www.satbrimobpoldasumsel.comhttp://www.satbrimobpoldasumsel.com	
2. Can you understand the menu on the website http://www.satbrimobpoldasumsel.com	
3. Can you link to the website of the Police?	
4. Can you find a link to the national police	
5. Can you find a facility announcement	
6. Can you access to other sites from the website site www.satbrimobpoldasumsel.com	
7. Can you get an important phone numbers on the site www.satbrimobpoldasumsel.com	
8. Can you get information menganai firefighter telephone number	
9. Can you find the information activities of the Police Mobile Brigade sumsel	
10. Can you find the meaning of the symbol of South Sumatra Police Mobile Brigade unit	
11. Can you find how many police station in the city of Palembang .	
12. Can you discover the vision and mission of the Police Mobile Brigade unit sumsel	
13. Can you find the organizational structure of the Police Mobile Brigade unit sumsel	
14. Can you find information about basic tasks sumsel regional police unit Brimob	
15. Can you find an explanation of the detachment.	
16. Can you find the email in the South Sumatra Police Mobile Brigade unit www.satbrimobpoldasumsel.com website	
17. Can you find out about the history of Mobile Brigade unit	
18. Can you find important news about South Sumatra Police Mobile Brigade	
EFFICIENCY	
1. Can you display information quickly Brimob activities	
2. Can you find the meaning of the symbol of unit Mobile Brigade	
3. Can you open a menu list of activities Brimob unit quickly	
4. Can you find how many police station in the Palembang city	
5. Can you find the website link police academy	
6. Can you find number important calls in South Sumatra Police Mobile Brigade unit	
7. Can you find a police station in the website address www.satbrimobpoldasumsel.com	
8. Can you find the data visible Brimob prior periods on the website www.satbrimobpoldasumsel.com	
9. Can you give feedback and criticism to the website	
10. Can you contact the website that is sent to the email website admin	
11. Can you see the picture activities of the Police Mobile Brigade unit sumsel	
12. Can you see the visitor statistics.	
13. Can you get into a discussion forum.	
14. Are messages , complaints , compliments you responded quickly.	
15. Can you mendapatkah information about the rules and discipline in the neighborhood South Sumatra Police Mobile Brigade	
ERROR	
1. Can you see the contents of the menu sections exist in the organizational structure	
2. Can you see the gallery menu	
3. Can you see the contents of the public reporting	
4. Can you go to the website of the police Mobile Brigade	
5. Can you get into the police academy website	
6. Can you go to the website of the police	
7. Can you display the mail (info @ satbrimobpoldasumsel)	
8. Can you download Announcement	
MEMORABILTY	
1. Is the name of the website that you open earlier	
2. Can you rediscover how much police station in the city of Palembang	
3. Can you find back important calls on the website before	
4. Can you rediscover the vision and mission of the Police Mobile Brigade unit sumsel	
5. Can you find kemblai official organizational structure Brimob unit sumsel pattern	
6. Can you rediscover the basic tasks of information sumsel regional police unit Brimob .	
7. Can you find the list of visible Brimob prior periods	
8. Can you find emails in a website www.satbrimobpoldasumsel.com	
9. Can you find the back of the unit history of the Mobile Brigade	
SATISFACTION	
1. Would you like to visit this website again	
2. Do you want to see the back of news information?	
3. Do you want to see the announcement of the return	
4. Do you want to make suggestions back	
5. Do you want to give criticism back?	
6. Do you want to see the photo gallery back?	
7. Do you want to open a discussion forum back	

3. Observe and record the specific behavior of the participants during an interoperability test can answer or not.

Of the process which has been done, next recapitulation of the entire respondents. The results of recapitulation is then done coding, provide an assessment of respondents' answers. Questions with yes and no answers given, the answer Yes is coded with the number 1 (one) and for answers is not encoded with the number 0 (zero). The last part is to determine the percentage of each response from the respondents.

3   RESULTS AND DISCUSSION

Recapitulation of the answers of the respondents has been collected, the next step is to perform the calculation results of the questionnaire. The calculation is done with a questionnaire that the first step is to determine the average time used by the respondent in working and answering a given task.

Percentage of the Task on "Interoperability Test Form". This calculation is done by changing into the form of the numbers of each answer with rule number 1 (one) if the answer to "can be found" or a check mark () and the number 0 (zero) is given to answer "can not be found" or on a cross (X). Task of each point is calculated the percentage, what percentage of that meeting and what percentage is not met. Task of each point on each subdivision is calculated subtotals and the final percentage is to calculate the total percentage of the overall respondent answers given both answers can be answered and the answer can not be answered.

3.1   Discussion

Based on the results of usability testing percentages above, the obtained value of recapitulation Usability Testing that provide value to user satisfaction or acceptance of each attribute. When adjusted again relationship with each aspect of usability testing, web application software that has been created has value Usability, that is: Learnability, Efficiency, Memorability, Errors, and Satisfaction are very good.

This is indicated by the results of usability on five attributes, such as:

1. Learnability ease recognizable aspects of the value of 92.59 and 7.41 for the unknown.

2. Efficiency aspects of ease in the search for the value of 62.22 and 37.78 for the unknown.

3. Memorability value ease of recall aspects of the menus and display of web pages for known 83.33 and unknown16.67.

4. Errors aspects of web convenience to avoid mistakes to be known by 77.08 and 22.92 of the unknown. item Satisfaction aspect of overall satisfaction attribute that has a value of 97.22 and the unknowns of 2.78.

4   CONCLUSION

From the research conducted it is concluded as follows:

1. Recapitulation of usability testing indicates that the website South Sumatra Police Mobile Brigade Unit showed acceptance by the user 50% so it can be said that the website South Sumatra Police Mobile Brigade Unit that has been made has had value

Usability aspects that is: learnability, efficiency, memorability, errors, and satisfaction is excellent.

2. Website South Sumatra Police Mobile Brigade Unit has complied the five aspects of usability, so it can be implemented as a system to be operated by the user.

References

Tullis, T., Albert, B.,(2008), *Measuring The User Experience*, Morgan Kaufmann.

J. Nielsen,(2008), Guerrilla HCI : Using Discount Usability Engineering to Penetrate the Intimidation Barrier, Usable Information Technology. *Http//www.useit.com/papers/gueeilla_hci.html*, 1994, retrieved January 29, 2008.

U. Sekaran,(1992), *Research Methods for Business a Skill-Building Approach*, 2nd ed.Canada : Jhon Wiley & Sons, Inc.

Basrowi, Sukidin,(2002), *Metode Penelitian Kualitatif Perspektif Mikro*. Surabaya : Insan Cendikia.

Marzuki,(2002), *Metodologi Riset*. Yogyakarta : Bagian Penerbitan Fakultas Ekonomi Universitas Islam Indonesia.

Suparmo P.,(2007), Uji Ketergunaan Situs Web jaringan Perpustakaan Asosiasi Perguruan Tinggi Khatolik Di Indonesia (APTIK) bagi Mahasiswa Yang Sedang Menulis Skripsi Pada tahun Akademik 2006/2007 Di Universitas Sanata Dharma Yogyakarta, *Tesis Magister, Universitas Indonesia.*