DESIGNING AND MEASURING WEB QUALITY TOWARD SATISFYING BUSINESS TRANSACTION OF WOMEN USER

Dwiza Riana[1)], Arfhan Prasetyo2[)]
STMIK Nusa Mandiri
Information System, STMIK Nusa Mandiri
Jl. Kramat Raya No 25, Jakarta Pusat 10450 Indonesia
dwiza_riana@yahoo.com, hujjahtul_bayan_hr@yahoo.com

ABSTRACT

The aim of this research is to find out how big is the influence of web quality toward satisfying transaction of women gender user. Besides that this research is also to find out degree of compability in determining some factors in increasing priority of women gender. Data analysis will have (x) as variable Web Quality and stasfying in transaction with women gender using variable (y) have reached corelation of coefisien as big as 0,658, It can be concluded a positif relation and significant between quality of web (x) and satisfying in transaction of women gender (y) have the form of regression linier Y = 38,297 + 0,384, X. Moreover result analysis of interest and implementation of satisfying transaction for women as business user have reached level of compatibility of service existence for 100 %, service responsive for 101,69%, service accurate for 100% service professionalism for 100,59%, totality satisfying with service 100,9%. Degree of compatibility of total satisfying with product is 93,73%. Conclusion of analysis, level interest factors needed to be maintenance because degree of implementation has compatible with interest and hope of women user are: service existence, service responsiveness, service professionalism, and the overall satisfaction with service, factors or attributes influence women gender user satisfaction which is less important to women, whereas accurateness of implementation is usual or sufficient that is accurateness service and overall satisfaction toward product. There are no factor or attribute considered to be exaggerated in its implementation, this particularly because women gender web user think those factors do not really important, however the most important is good implementation.

Keywords

Web Quality, Regresion, Compatibility level and Priority

1. INTRODUCTION

According to survey result done by Pew Internet and American Life Project (www.nad.go.id, 2005), men have less time in internet but more time login. Furthermore a lot of men prefer to access broadband than women. Men tend to prefer online service with action orientation. While women prefer to get profit in making relationship.

Internet usage in business such as e-commerce, allows internet users to shop online without visiting the shop a placed where things are sold. Moreover, the usage of internet banking has made bank customers to do transaction easily without queuing and coming to the bank. Interesting thing of the internet usage above is the survey result done by telkom written in portal SWA magazine; it mentioned that men are 70% more dominant in using internet compares to women. Meanwhile Friendster statistic in Indonesia claimed 900.000 of its member 57% are Indonesian women. Furthermore, based on survey and analysis done by *Pusat Pengkajian dan Penerapan Teknologi Informasi dan Elektronika (P3TIE) Badan Pengkajian dan Penerapan Teknologi, TelkomNetIinstan* the most ISP used, namely as big as 49,59%, than CBN as big as 20,25%, Centrin as big as 8,26% and the last one IndosatNet as big as 6,20%.from gender point of view, it estimated the internet users of male are 75.86%, while women are 24.14%. Whereas educational level point of view shows the level of bachelor is the highest user of 43%, hence Senior high level is as big as 41 %. Based on profession, college students are the most intense user in using internet, it reaches 39%.

Overall, the percentage of men and women using internet are relatively the same. About 68 percent of men and 66 percent of women claim on the use of web. For the last ten years, men are proven to be dared in doing risky action in the internet, such as joining chat room or doing transaction in online stock market. About 30 percent men join auction in internet compares to 18 percent women. Men often visit internet site, about 44 percent men use web several times, while women 39 percent. Furthermore, about 78 percent of men use broadband in their working place

compare to women who has just 69 percents. Nevertheless the percentage of broadband usage at home is equal between men and women.

Web is facilitator to do business transaction to its user. Women as user must use and understand business transaction they have chosen correctly. Understanding the usage of electronic transaction accurately to women user such as procedures, facilities terms influence the effectiveness of business transaction will lead to the orientation of the satisfying of women user it self. There is one question on how the quality of web should be, to be liked by women user, whether web design has fulfill all women user need especially in the quality of web to give online transaction facility to women user.

In this research, researcher would like to do research on designing web for business transaction and analyzing level of interest and implementation of women satisfaction in doing online transaction.

2. Data Description and Analysis

Measuring web quality involves amount of samples to give scoring data of web quality. Sample consists of women gender user. Sample is taken by inviting some women from various occupations through email electronic or invitation to fill in data from milis to milis. Raw data of questioner of Web Quality (X) and Satisfying Business Transaction of Women user (Y) consist of questioner recapitulation of 36 respondents of web quality and 34 respondent of satisfying business transaction for women gender. The third data is the result of questioner on interest level toward business satisfying transaction of women user (Z) it has 32 respondents. The example of questioner data web quality can be seen in following table.

Table 1. Data Tabulation of Perspective Respondent Toward Web Quality (X). (whim sources, 2009)

SKOR UNTUK PERTANYAAN NOMOR :																			SKOR
4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	TOTAL
3	1	1	2	3	4	3	2	1	2	3	3	2	1	2	3	3	46
5	5	4	4	4	4	4	5	4	5	5	4	4	4	4	4	3	84
3	5	4	2	2	5	5	5	5	5	5	5	5	2	2	3	2	75
4	4	3	4	4	2	2	4	4	4	4	4	0	2	4	4	4	69
3	5	5	3	3	2	5	5	5	5	5	4	4	3	3	5	5	80
4	4	4	3	3	4	3	3	3	4	4	3	3	3	3	3	3	66
3	2	2	1	3	2	1	2	3	3	2	2	1	1	3	4	4	46
	3	2	1	2	1	2	2	3	2	1	3	3	1	3	2	3	3	43
5	5	5	4	4	5	5	4	4	5	5	4	4	4	5	3	2	85
3	3	3	3	3	3	3	3	3	3	3	3	0	3	3	3	3	3	57
4	4	4	4	4	4	5	4	4	4	4	4	5	5	4	4	4	84
5	5	5	3	3	3	4	4	3	5	5	5	5	4	3	5	5	84
5	5	3	3	3	5	4	4	4	5	5	5	5	4	3	4	4	84
5	5	5	5	5	5	5	5	5	5	5	5	5	2	2	4	4	92
3	4	4	3	3	3	3	4	4	4	3	3	3	3	4	3	3	68
4	5	4	4	4	4	5	4	4	5	4	4	4	4	5	4	4	85
4	4	4	4	4	5	4	5	5	4	5	4	4	4	4	5	4	85
4	5	5	3	3	3	3	4	4	4	4	3	4	4	4	4	4	75
4	3	4	0	3	4	4	4	3	4	4	4	4	2	3	4	4	69
4	3	3	3	3	4	4	4	4	4	4	4	4	3	3	3	4	72
3	3	4	2	4	5	4	5	3	4	4	4	4	4	3	3	4	74
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	82
3	4	4	1	1	2	1	5	5	4	4	4	4	4	4	4	4	66
3	4	4	2	1	1	4	4	4	4	2	4	4	3	3	3	3	62
3	4	3	3	0	2	3	3	3	3	3	3	2	3	2	3	3	55
5	4	4	3	4	0	4	4	3	4	4	3	3	4	4	4	4	73
4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	80
5	4	5	4	4	4	5	4	4	4	4	4	5	5	4	4	5	86
3	3	4	4	4	3	3	3	4	4	4	3	4	3	3	4	3	70
3	4	4	4	3	4	4	4	4	3	4	4	4	3	3	4	4	74
4	3	3	2	3	3	4	3	3	4	4	3	3	3	2	3	3	63
4	4	4	3	3	2	3	4	3	4	4	3	4	4	3	3	3	66
3	4	5	3	3	3	3	4	4	3	3	4	4	3	3	3	3	66
4	3	4	3	3	3	4	0	3	3	3	2	2	2	3	3	3	58
4	5	5	3	4	4	4	4	4	4	4	5	5	4	4	4	4	85
5	5	5	0	5	5	5	5	4	5	5	5	5	5	5	5	5	94

a. Validity Testing

Based on data collected from 36 respondents, there are 20 coefficient correlations accordance to journal question items tested. The result of analysis items of research instrument is presented in this table.

Table 2 Value of Coefficient Correlation for every question of Web Quality Data (X).

Nomor Butir Instrumen	Koefisien Korelasi	Keterangan
1	0,860	Valid
2	0,898	Valid
3	0,788	Valid
4	0,872	Valid
5	0,770	Valid
6	0,562	Valid
7	0,785	Valid
8	0,484	Valid
9	0,807	Valid
10	0,720	Valid
11	0,833	Valid
12	0,690	Valid
13	0,711	Valid
14	0,791	Valid
15	0,661	Valid
16	0,806	Valid
17	0,854	Valid
18	0,650	Valid

Table 3 Value of Correlation Coefficient for every question of Satisfying Buyer Data (Y)

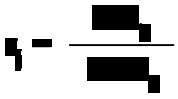
Nomor Butir Instrumen	Koefisien Korelasi	Keterangan
1	0,598	Valid
2	0,731	Valid
3	0,672	Valid
4	0,592	Valid
5	0,600	Valid
6	0,624	Valid
7	0,831	Valid
8	0,424	Valid
9	0,558	Valid
10	0,613	Valid
11	0,317	Valid
12	0,630	Valid
13	0,810	Valid
14	0,649	Valid
15	0,660	Valid
16	0,613	Valid
17	0,807	Valid
18	0,832	Valid

Table 4 Value Coefficient Correlation for every questions of Satisfying Buyer Data (Z)

From value of coefficient correlation of every question, the three instrument items are already valid because the value obtained is r 0,3, so instrument can be used for making scoring.

b. Reliability Instrument Testing

Reliability testing of each instrument is done by using SPSS 11.5. Testing of the reliability of those three dimension variables is done empirically (internal consistency) by seeing coefficient and data accuracy in Split Half Spearman Brown. Instrument item splits into two groups, even and odd instruments. After those instruments are arranged separately, total score will be counted and two groups are achieved; even and odd groups. Than coefficient of those two groups are searched. Furthermore after those coefficient correlations are found, those coefficients are put into Spearman Brown formula as we can see bellow:



……. ……(1)

Reliability testing for those three instruments can be seen in its result on table 5-7. Value of coefficient correlation for even and odd for those three instruments show 0,911 for web quality variable, for variable in transaction satisfying as big as 0,862 and for variable interest is as big as 0,932. Counting with the formula 1 has correlation score 0,963 for web quality, 0,699 for satisfying in transaction and 0,931 for level of interest. It shows those three reliable instruments can be used in this research.

Table 5. Value of Correlation Total Score and even data Web Quality with SPSS 11.5

		TOTALGJL	TOTALGNP
TOTALGJL	Pearson Correlation	1	,911(**)
	Sig. (2-tailed)	.	,000
		TOTALGJL	TOTALGNP
TOTALGJL	Pearson Correlation	1	,932(**)
	Sig. (2-tailed)	.	,000
	N	32	32
TOTALGNP	Pearson Correlation	,932(**)	1
	Sig. (2-tailed)	,000	.
	N	32	32

		TOTALGJL	TOTALGNP
TOTALGJL	Pearson Correlation	1	,862(**)
	Sig. (2-tailed)	.	,000
	N	34	34
TOTALGNP	Pearson Correlation	,862(**)	1
	Sig. (2-tailed)	,000	.
	N	34	34

Table 6. Value of Total Correlation Score even and odd data Buyer Satisfying with SPSS 11.5

Table 7 Value of Correlation Total Score in odd and even data of College Students with SPSS 11.5

Correlations

** Correlation is significant at the 0.01 level (2-tailed).

c. Calculation of Correlation Score and Determination Coefficient

Second data variable is correlated by using

		KEPUASAN	MUTU_WEB
Pearson Correlation	KEPUASAN	1,000	,471
	MUTU_WEB	,471	1,000
Sig. (1-tailed)	KEPUASAN	.	,002
	MUTU_WEB	,002	.
N	KEPUASAN	34	34
	MUTU_WEB	34	34

Pearson Moment Correlation (Correlation Product Moment). Result of data processing using software SPSS 11.5 for Windows can be seen in the picture

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	791,033	1	791,033	9,103	,005(a)
	Residual	2780,732	32	86,898		
	Total	3571,765	33			

bellow:

Picture1. Value of Coefficient Correlation Variable Web Quality with Business Satisfying Transaction.

The result of calculation above has reached the coefficient correlation as big as 0,471 than this r score is counted compare with r table with the amount of data (n) 34 by taking significant level as much as 5%, so r table score will reach =0,339. From calculation and comparison result of table r shows the score of calculation r> r table, is 0,471>0,423. It can be stated that there is positive relation and significant between web qualities and satisfying of business transaction for women or quality of web influences satisfying of business transaction significantly.

The influence of web quality toward satisfying business transaction for women can be found through determination coefficient $r^2 = (0,471)^2 = 0,2218$. Therefore variant that occurs in business satisfying transaction for women can be explained

through variant occurs in variable web quality, while 99,78 % of the rest consists other factors:

3. Research Result

Regression Linier of Web Quality Model

a. Toward Satisfying Transaction to Woman Gender User

Simple regression analysis is done by using two variables X and Y, to get the value of a and b data processing with SPSS is done, and the score achieved is:

Model		Unstandardized Coefficients		Standardized Coefficients			95% Confidence Interval for B		
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order
1	(Constant)	38,297	9,109		4,204	,000	19,743	56,851	
	MUTU_WEB	,384	,127	,471	3,017	,005	,125	,643	,471

Picture 2. Coefficient regression value Web Quality Competence with Business Satisfying Transaction.

From Data above a score =38,297 and b score = 0,384, so the simple regression score made are:

Ỳ = 38,297 + 0,384, X

Than hypothesis test is made statistically toward simple regression linier model achieved. Hypothesis used in analyzing regression are:

1. Tangible or intangible Test or Regression Model

Hipotesa: H0 : b1 = 0

H1 : b1 0

Or it can be inferred as:

HO: Web Quality Competence and Satisfying Making business transaction does not make linier line.

H1: Web Quality Competence and Business Satisfying Transaction have linier line.

Testing criteria is Reject Ho, if Fcalculation> F , 1, n-2 value of Fresult achieved from SPSS processing is:

Picture 3. Web Quality Anova and Business Satisfying Transaction of Women User

From data above the score of Fcalculation =9,103, by getting a significant level for about 5% so from distribution table F the score reaches is F TABEL For F0,05, 1, 34 = 0,4145. It is shown that 9,103 >4,145 Ho is rejected. Therefore it can be stated that Web Quality and Business Transaction of Women User has linier line relationship.

2. Coefficient Regression Significant Testing

Tangible testing of significant coefficient reached toward two coefficients by using t student statistic as tester. The test done by:

a. First Coefficient (constant)

Hypothesis:

H0: Regression Coefficient is no significant

H1: Coefficient Regression is significant

Testing criteria is to Reject Ho, If tcalculation > t /2; n-2.

From that calculation, the t calculation score is 4,204 with 5 % level of significant therefore t table value is t0,05; 32 = 2,04.

So the value of 4,204>2,04, Ho can be rejected with constant influence toward another regression model.

b. Second Coefficient

Hypothesis:

H0: Insignificant Coefficient Regression

H1: Significant Coefficient Regression

Testing criteria is to Reject Ho, if tcalculation > t /2; n-2. From picture 4.43 the t calculation score reached is 3,017, with significant level 5% so the t table value is t0,05; 32=2,04. Therefore the value of 3,017> 2,04 Ho can be rejected, in another word "Web Quality influences toward women business satisfying transaction.

b. Analysis of Interest and Satisfying Level of Women User

Compatible level of comparison result score between implementation score and interest score. This compatible score will define some serial increasing priority factors influenced satisfaction of women gender web user. In this analysis there are two variables represented by X and Y, Where X is implementation level provided satisfaction to women gender web user, while Y is level interest of women web user.

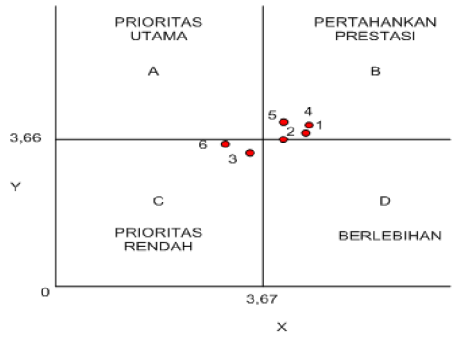
Bobot	SKOR UNTUK PERTANYAAN NOMOR :																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
SS = 5	8	6	3	5	10	7	4	3	3	4	7	3	4	4	5	2	1	8
S = 4	18	19	18	18	13	10	17	7	10	13	15	15	16	14	16	11	17	18
N = 3	2	4	8	8	8	11	7	17	16	12	7	10	8	11	10	15	10	2
TS = 2	2	1	2	0	0	2	2	3	1	2	1	3	3	1	0	1	3	2
STS = 1	1	1	0	0	0	1	1	1	0	0	1	0	0	1	0	0	0	1
Total	31	31	31	31	31	31	31	31	30	31	31	31	31	31	31	29	31	31

Tabel 8. Respondent Value toward implementation level

Bobot	SKOR UNTUK PERTANYAAN NOMOR :																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
SP = 5	8	6	3	4	10	7	4	3	3	4	7	4	4	4	5	2	13	2
P = 4	18	19	18	18	13	10	17	7	10	13	15	16	16	16	16	11	11	13
CP = 3	2	4	8	8	7	11	7	17	16	12	7	3	3	8	10	15	7	12
KP = 2	2	1	2	0	1	2	2	3	1	2	1	8	8	3	0	1	0	2
TP = 1	1	1	0	0	0	1	1	1	0	0	1	0	0	0	0	0	0	2
Total	31	31	31	30	31	31	31	31	30	31	31	31	31	31	31	29	31	31

Table 9. Respondent Value Toward Interest level

Rectangular diagram is made based on X average data and Y so the whole data can be represented in this picture:



The result of service items measurement is based on interest level and implementation level made by web administrator to focus on some improvements which considered being very important to women user, so it will be satisfying.

As for the interpretation of diagram can be explained as:

1. quadrant A

   Shows factor or attribute that influence women gender web user on this quadrant and its management need to be prioritized, because this factor is considered to be very important by user, while the implementation level is still unsatisfying. In this research there isn't any component on quadrant.

2. quadrant B

   Shows factors or attribute influenced women gender web user on this quadrant needs to be maintained, because normally the level of implementation has compatible with interest and hope of women web user, so it can satisfied women gender user. Factors included on B quadrant is the existence of service (=1) service respond (=2), service professionalism (4) and overall satisfying with service (5).

3. Quadrant C

   Shows factors or attribute influenced women gender user on this quadrant is estimated to be less important to women gender web user, while the quality of implementation is considered to be usual or sufficient. So some factors included in Quadrant C is service accurateness (=3) and overall satisfying toward product (=6).

4. Quadrant D

   Shows factor and attribute influenced women gender web user on this quadrant considered to be exaggerated in its implementation, it usually caused by women web user think that factor is not too important, but its implementation is done perfectly.

5. Conclusion

Some matters need to be concluded:

1. Analysis data process and method used can be used for finding how big is influence of web quality toward business satisfying transaction for women gender user and to find compatibility level which determines order of increasing priority factors which also influence the satisfying women gender user in business transaction.
2. From result analysis of interest level and implementation for variable satisfying women gender user in business transaction, compatibility level for service existence is as big as 100 %, service respond as big as 101,69%, service accurateness is 100 % service professionalism is as big as 100,95. Overall level of compatible satisfying with product is as big as 93,73%.

On the contrary to get more information, adding of sample amount is needed, so additional information supporting this research can be achieved. Remembering there are many factors or other variables influence the satisfying of women user in business transaction, this research ought to include other variables.

REFERENCES

[1] Anonamus, 2000, Model Penelitian Dan Pengolahannya Dengan SPSS 10.01, Penerbit Andi, Yogyakarta.

[2] Burch, Jhon and Grudnitski, Gary, 1986, *Information System Theory and Practice*, John wiley & Sons, New York.

[3] Christense, Leslie A and Smith, Robert D, 1999, *"Information System Quality and Value: A Comparison Study of User Versus IS Perception"*, Journal of Information Technology Management 2 (Number 3).

[4] Davis, F. D. 1989. Perceived Usefulness, Rerceived Ease of Use and User Acceptance of Information Tehnology, Management Information System Quarterly.

[5] Fitzgerald, Jeffry, Fitzgerald, Arda F and Staling, Jr, Warend, 1986, *Fundamental of System Analysis*, Edisi Kedua : New York.

[6] Hayes Bob.E, Measuring Customer Satisfaction: *Development And Use of Quiestionnaires*: ASQC Quality Proses

[7] Harmadi, Ashar & Hermana, Budi. 2005. Analisa Karakteristik Individu dan Prilaku Penguna Internet Banking, Reliabilitas dan Validitas Instrumen Pengukuran. Seminar Nasional Aplikasi Teknologi Informasi. Yagyakarta (http://nustaffsite.gunadarma.ac.id)

[8] Kadir, Abdul., 2005. Pengenalan Teknologi Informasi, Andi, Yogyakarta.

[9] Natigor Nasution, Fahmi. 2004, Pengunaan Teknologi Informasi Berdasarkan Aspek Perilaku (Behavioral Aspect), USU Digital Library (http://library.usu.ac.id).

[10] Parasuraman, A, Zeithaml, V.A and Berry,1985, *"A Conceptual Model of Service Quality and is Implications for Future Research"*, Journal of Marketing (fall): 40-51.

[11] Parasuraman, A, Zeithaml, V.A and Berry, 1988, "*SERVQUAL: A Multiple-item Scale for Measuring Consumer Perceptions of Service Quality"*, Journal of Retailing 64: 12- 40.

[12] Riana, Dwiza,2004. *Pengaruh Mutu Perangkat Lunak Sistem Informasi Pembayaran Biaya Kuliah Dan Kompetensi Teknis Karyawan Terhadap Kepuasan Mahasiswa Pada AKOM BSI*, Tesis, Jakarta.

[13] Siregar, Syafarudin. 2004. Statistik Terapan Untuk Penelitian, Grasindo, Jakarta,.

[14] Soentoro, A. Idris, 2002, *Cara Mudah Belajar Metodologi Penelitian Bisnis*, CV Taramedia, Jakarta.

[15] Stern, Morgan.1998. NetWare Untuk Koneksi Ke Internet, Elexmedia Komputindo, Jakarta.

[16] Sulaiman, Wahid, 2002, *Jalan Pintas Menguasai SPSS 10,* Penerbit Andi, Yogyakarta

[17] Supranto. J, 2001, *Pengukuran Kepuasan Pelanggan Untuk Menaikkan Pangsa Pasar*, Penerbit Rineka Cipta, Cetakan Kedua, Jakarta.

[18] Wibowo, Arif. 2008. Kajian Tentang Prilaku Pengguna Sistem Informasi Dengan Pendekatan Technology Acceptance Model (TAM) (http://peneliti.bl.ac.id)