

## **CUSTOMER SATISFACTION AND PURCHASE INTENTION OF THE STORE FACEBOOK FAN PAGES**

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### **ABSTRACT**

*Facebook is an online social networking service and as of September 2012, Facebook has over one billion active users. In the context of the store Facebook fan pages, few studies have examined the e-service quality dimensions, information quality and interaction constructs to predict brand image, customer satisfaction and purchase intention. The study attempts to develop the research model to integrate SERVQUAL model with information quality and interaction constructs to understand the users' behavior on the store Facebook fan pages. To test the research hypotheses, the users on the store Facebook fan pages were chosen as representative subjects. A total of 202 online surveys were voluntarily completed toward one store Facebook fan page. Users of different gender and career don't influence the perceptions of service quality, information quality, interaction constructs, brand image, customer satisfaction and purchase intention. The users' age only influences their perceptions of reliability. The user education level is associated with the perceptions of information quality, reliability and customer satisfaction toward the store Facebook fan pages.*

**Keywords:** Facebook fan pages, Service Quality, Brand image and Customer Satisfaction

### **INTRODUCTION**

Facebook is an online social networking service and as of September 2012. Facebook has over one billion active users [5]. Facebook is designed with several categories of participation: individual profile pages, groups, and fan pages. There are 700,000 businesses maintain Facebook fan pages and have attracted 5.3 billion fans to their Facebook and ultimately to a Web site [5]. Facebook fan Pages have robust features for connecting people to a topic you care about, like your business or organization. Some of Facebook fan pages are maintained by companies or organizations as a means of advertising and marketing [11]. Facebook allows users to invite your friends, existing customers and target new people who you think might be interested in your page. When people like or comment on your posts, their friends can see them connecting with your Page. You can get important new likes and customers through this kind of word-of-mouth marketing [12].

The SERVQUAL model was proposed by Parasuraman et al. [13] to conceptualize service quality as the relative perceptual distance between customer expectations and evaluations of service experiences and service quality. Composed of five dimensions (including tangibles, reliability, responsiveness, assurance, and empathy), the model is widely adapted to measure e-retailing service quality [2, 10, 16], online auctions service quality [7], e-banking service quality [14], e-government service quality [18], online travel service quality [17] and web-based service quality [8, 9]. Systems quality and information quality are considered an important component of website quality. Separate measures of website information quality and website system quality are consistent with information systems quality models by DeLone and McLean [4] and Spreng et al. [15].

In the context of the store Facebook fan pages, few studies examined the e-service quality dimensions, information quality and interaction constructs to predict brand image, customer satisfaction and purchase intention. The study attempts to develop the research model to integrate SERVQUAL model with information quality and interaction constructs to understand the users' behavior on the store Facebook fan pages.

The research hypotheses to be tested are as follows:

H<sub>1</sub>: User gender significantly influences the perceptions of information quality, service quality, interaction towards the store Facebook fanpage.

- H<sub>2</sub>: User gender significantly influences brand image, customer satisfaction and purchase intention towards the store Facebook fanpage.
- H<sub>3</sub>: User age significantly influences the perceptions of information quality, service quality, interaction towards the store Facebook fanpage.
- H<sub>4</sub>: User age significantly influences brand image, customer satisfaction and purchase intention towards the store Facebook fanpage.
- H<sub>5</sub>: User career significantly influences the perceptions of information quality, service quality, interaction towards the store Facebook fanpage.
- H<sub>6</sub>: User career significantly influences brand image, customer satisfaction and purchase intention towards the store Facebook fanpage.
- H<sub>7</sub>: User education significantly influences the perceptions of information quality, service quality, interaction towards the store Facebook fanpage.
- H<sub>8</sub>: User education significantly influences brand image, customer satisfaction and purchase intention towards the store Facebook fanpage.

## RESEARCH METHODOLOGY

### Characteristics of the Sample and Study Context

To test the research hypotheses, the users on the store Facebook fan pages were chosen as representative subjects. A total of 202 online surveys were voluntarily completed toward one store Facebook fan page. Of the 202 respondents, 105 were females (52%) and 97 were males (48%). The age range of the sample was 15–45 years old. 122 were students (60%) and 80 were with full-time job (40%). 111 were with bachelor degree (55%) and 79 were with master degree (39%) showed in Table 1.

**Table 1.** Subject demographic (n=202)

Measure and items	Frequency	Percentage
<b>Gender</b>		
Male	97	48.0%
Female	105	52.0%
<b>Age</b>		
15-20	13	6.4%
21-25	124	61.4%
26-30	41	20.3%
31-35	22	10.9%
36-40	0	0%
41-45	2	1.0%
<b>Career</b>		
Student	122	60.4%
Not student	80	39.6%
<b>Education</b>		
Junior high school	1	0.5%
Senior high school	11	5.4%
Bachelor degree	111	55.0%
Master degree	79	39.1%

**ANALYSIS AND RESULTS**

**Measures**

The alpha-level of the sample indicates a reasonable level of reliability ( $\alpha > 0.70$ ) [3], revealing adequate internal consistency (Table 2). Table 3 shows the each variable' the square root of AVE and intercorrelations. Convergent validity of the instrument is appropriate when the constructs have an average variance extracted (AVE) of at least 0.5 [6]. All items loadings of each construct are larger than cross-loadings of that construct with all other constructs in the model. Hence, the convergent validity and discriminant validity in the research model were adequate.

**Table 2.** Construct Means, Standard Deviations and Reliabilities

<b>Construct</b>	<b>Number of Items</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Cronbach Alpha</b>	<b>AVE</b>
Information Quality	IQ 1	4.940594	0.890210	0.831	0.831
	IQ 2	4.970297	0.961502		
	IQ 3	5.495050	1.018474		
	IQ 4	5.371287	1.020081		
Reliability	Rel 1	4.881188	0.980274	0.843	0.843
	Rel 2	4.841584	0.994839		
	Rel 3	4.886139	0.909817		
	Rel 4	5.049505	1.011144		
Responsiveness	Re 1	5.024752	0.959053	0.769	0.769
	Re 2	5.019802	1.145879		
	Re 4	4.816832	0.946906		
Assurance	As 1	5.336634	0.855503	0.813	0.813
	As 2	5.292079	0.885953		
	As 3	5.267327	0.996422		
Empathy	Em 1	4.381188	1.021287	0.822	0.822
	Em 2	4.806931	0.970896		
	Em 3	4.336634	1.157087		
	Em 4	4.727723	0.987546		
Interactive Quality	InQ 1	5.292079	0.868943	0.817	0.817
	InQ 2	4.876238	1.050719		
	InQ 3	4.876238	0.891937		
Interactive Frequency	InF 1	4.683168	1.119085	0.849	0.849
	InF 2	3.737624	1.332887		
	InF 3	3.594059	1.457035		
	InF 4	3.737624	1.302684		
Interactive Degree	InD 1	4.539604	1.051375	0.838	0.838
	InD 2	4.282178	1.215398		
	InD 3	4.331683	1.130265		
Brand Image	BM 1	5.425743	0.934113	0.846	0.846
	BM 2	5.613861	1.050660		
	BM 3	5.148515	1.166584		
	BM 4	5.480198	1.129480		
	PI 2	5.584158	0.995186		
	PI 3	5.589109	0.959104		
Customer Satisfaction	CS 1	5.014851	0.974693	0.870	0.870
	CS 2	5.257426	1.042896		
	CS 3	5.188119	0.943297		
Purchase Intention	PI 1	5.534653	0.957446	0.921	0.921
	PI 2	5.584158	0.995186		

	PI_3	5.589109	0.959104		
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Factor analysis also confirmed that the construct validity of the scales could be measured adequately. Using the principal components method with varimax rotation, construct validity was examined. Table 4 reports the factor loadings for each of the factors items. Bagozzi and Yi [1] suggested that factor loadings for each item should be over 0.6 to be valid. The factor loadings for all items exceeded 0.7 in this study. All item loadings for each construct were greater than cross-loadings of that construct with all other constructs. Hence, convergent validity and discriminant validity were adequate.

**Table 3.** Correlations and Average Variance Extracted (AVE)

	IQ	REL	RE	AS	EM	INQ	INF	IND	BM	CS	PI
IQ	<b>0.912</b>										
REL	0.658	<b>0.918</b>									
RE	0.610	0.753	<b>0.877</b>								
AS	0.693	0.725	0.671	<b>0.902</b>							
EM	0.409	0.641	0.572	0.552	<b>0.907</b>						
INQ	0.528	0.586	0.528	0.623	0.597	<b>0.904</b>					
INF	0.391	0.445	0.426	0.340	0.440	0.402	<b>0.921</b>				
IND	0.398	0.476	0.402	0.410	0.529	0.518	0.635	<b>0.915</b>			
BM	0.668	0.626	0.608	0.726	0.535	0.601	0.309	0.371	<b>0.920</b>		
CS	0.703	0.716	0.677	0.720	0.620	0.585	0.423	0.439	0.762	<b>0.933</b>	
PI	0.556	0.575	0.532	0.621	0.459	0.541	0.218	0.319	0.800	0.742	<b>0.960</b>

Diagonal **bolded** elements are the square root of AVE.

**Table 4.** Factor Loadings and Cross-Loadings

	IQ	REL	RE	AS	EM	INQ	INF	IND	BM	CS	PI
IQ_1	<b>0.7738</b>	0.5193	0.5095	0.4782	0.3356	0.3446	0.3928	0.3719	0.4616	0.5296	0.3792
IQ_2	<b>0.8708</b>	0.5791	0.5078	0.5739	0.4198	0.4527	0.3826	0.3811	0.5609	0.6005	0.4637
IQ_3	<b>0.8163</b>	0.4285	0.4614	0.5202	0.2056	0.3958	0.2515	0.2882	0.5038	0.5181	0.4063
IQ_4	<b>0.8145</b>	0.6083	0.5170	0.6729	0.3638	0.5134	0.2628	0.2731	0.6385	0.6389	0.5483
Rel_1	0.5299	<b>0.7838</b>	0.5383	0.5757	0.4423	0.4709	0.3719	0.3363	0.5028	0.5775	0.4749
Rel_2	0.3868	<b>0.8079</b>	0.5685	0.5170	0.6172	0.4756	0.3799	0.4288	0.3999	0.4787	0.3616
Rel_3	0.5284	<b>0.8620</b>	0.6793	0.5871	0.5569	0.4633	0.3733	0.3995	0.4929	0.5950	0.4770
Rel_4	0.6815	<b>0.8599</b>	0.6913	0.6940	0.5312	0.5280	0.3593	0.4195	0.6383	0.6873	0.5586
Re_1	0.5741	0.7383	<b>0.8545</b>	0.6209	0.4977	0.5113	0.3341	0.3634	0.5508	0.6189	0.5018
Re_2	0.4014	0.5108	<b>0.7954</b>	0.4548	0.4227	0.3106	0.2658	0.2193	0.4542	0.5110	0.3994
Re_4	0.5367	0.6173	<b>0.8522</b>	0.5903	0.5063	0.4837	0.4607	0.4107	0.5117	0.5575	0.4229
As_1	0.6363	0.6332	0.6424	<b>0.8877</b>	0.4829	0.5565	0.2678	0.3137	0.6951	0.6733	0.6027
As_2	0.5313	0.5843	0.4911	<b>0.8061</b>	0.4388	0.5095	0.3011	0.4039	0.5373	0.4993	0.4757
As_3	0.6080	0.6474	0.5787	<b>0.8779</b>	0.4984	0.5381	0.3125	0.3536	0.6211	0.6608	0.5113
Em_1	0.2706	0.5288	0.4275	0.3999	<b>0.7902</b>	0.3581	0.3525	0.3897	0.3179	0.4469	0.2577
Em_2	0.4430	0.5829	0.5234	0.5828	<b>0.8600</b>	0.5489	0.3923	0.4259	0.5287	0.6175	0.4586
Em_3	0.1831	0.4884	0.4238	0.2507	<b>0.7844</b>	0.3883	0.4280	0.4862	0.2840	0.3629	0.2321
Em_4	0.3531	0.4708	0.4564	0.4653	<b>0.8010</b>	0.5740	0.2808	0.4323	0.5155	0.5127	0.4558
InQ_1	0.4834	0.5619	0.5006	0.6165	0.5352	<b>0.8534</b>	0.2546	0.3813	0.5823	0.5449	0.5361
InQ_2	0.4109	0.4452	0.4235	0.4634	0.4812	<b>0.8763</b>	0.3863	0.4861	0.5067	0.4598	0.4605
InQ_3	0.4628	0.4961	0.4313	0.5151	0.5203	<b>0.8524</b>	0.4123	0.4799	0.4497	0.4970	0.3855
InF_1	0.4526	0.4348	0.4162	0.4122	0.3874	0.4007	<b>0.8456</b>	0.4427	0.4267	0.4585	0.3305
InF_2	0.1630	0.3131	0.3332	0.1577	0.3745	0.2466	<b>0.7460</b>	0.5540	0.1043	0.2140	0.0339
InF_3	0.2105	0.2918	0.2663	0.1687	0.3746	0.3338	<b>0.8462</b>	0.5812	0.1213	0.2684	0.0538
InF_4	0.2869	0.3440	0.3151	0.2174	0.2997	0.2597	<b>0.8209</b>	0.6022	0.1554	0.3080	0.1111
InD_1	0.4473	0.4368	0.3704	0.4360	0.3766	0.4871	0.5387	<b>0.8210</b>	0.3565	0.3483	0.2894
InD_2	0.3331	0.4320	0.3434	0.3381	0.4833	0.4238	0.5821	<b>0.9107</b>	0.2797	0.3881	0.2572

<b>InD_3</b>	0.2662	0.3803	0.3376	0.3009	0.5215	0.4430	0.5435	<b>0.8858</b>	0.3317	0.4099	0.2879
<b>BM_1</b>	0.6250	0.6099	0.5582	0.6854	0.4854	0.5512	0.3271	0.2922	<b>0.8805</b>	0.6752	0.6720
<b>BM_2</b>	0.5745	0.5458	0.5445	0.5991	0.4452	0.5029	0.2368	0.2821	<b>0.8369</b>	0.5556	0.6667
<b>BM_3</b>	0.4547	0.4197	0.3833	0.5060	0.3986	0.4798	0.2400	0.3602	<b>0.6801</b>	0.5174	0.5327
<b>BM_4</b>	0.5312	0.4712	0.4858	0.5850	0.4454	0.4902	0.2214	0.3602	<b>0.8652</b>	0.7064	0.7423
<b>CS_1</b>	0.5752	0.6401	0.6287	0.6520	0.6028	0.5292	0.4070	0.4941	0.6569	<b>0.8512</b>	0.5955
<b>CS_2</b>	0.6449	0.6405	0.5790	0.6864	0.5230	0.5484	0.3549	0.4076	0.7409	<b>0.9233</b>	0.7080
<b>CS_3</b>	0.6580	0.6482	0.6223	0.6036	0.5580	0.4993	0.3851	0.3099	0.6495	<b>0.9069</b>	0.6766
<b>PI_1</b>	0.4995	0.5508	0.5056	0.6064	0.4851	0.5160	0.1959	0.3629	0.7500	0.6841	<b>0.9272</b>
<b>PI_2</b>	0.5358	0.5042	0.4413	0.5419	0.3805	0.4866	0.2063	0.2384	0.7316	0.6932	<b>0.9159</b>
<b>PI_3</b>	0.5306	0.5400	0.5160	0.5735	0.3952	0.5033	0.2101	0.2629	0.7677	0.7032	<b>0.9504</b>

Data associated with all constructs were analyzed using a one-way-ANOVA test with the independent variable. The results of the independent sample t-test on all constructs are summarized in Table 5, 6. Users of different gender and career don't influence all constructs. The users' age influences their perceptions of reliability (F=4.161, p=0.043). Older users (age > 25, Mean = 5.081) perceive that store Facebook fanpage has the ability to perform the promised service in a dependable and accurate manner than younger users (age < 26, Mean = 4.836).

**Table 5.** The impact of gender and age on all constructs

Construct	Gender		Age	
	F	P-value	F	P-value
Information Quality	0.818	0.367	0.005	0.944
Reliability	1.188	0.277	4.161	0.043*
Responsiveness	3.102	0.080	0.127	0.722
Assurance	0.576	0.449	0.000	0.993
Empathy	0.099	0.754	0.761	0.384
Interactive Quality	3.585	0.060	0.321	0.571
Interactive Frequency	1.956	0.163	0.343	0.559
Interactive Degree	0.277	0.599	2.357	0.126
Brand Image	1.308	0.254	0.492	0.484
Customer Satisfaction	0.007	0.934	0.048	0.826
Purchase Intention	0.943	0.333	0.150	0.699

\* p < 0.05, \*\* p < 0.01

**Table 6.** The impact of career and education on all constructs

Construct	Career		Education	
	F	P-value	F	P-value
Information Quality	1.304	0.255	4.169	0.042*
Reliability	0.671	0.414	5.341	0.022*
Responsiveness	0.722	0.397	1.431	0.233
Assurance	0.959	0.329	1.086	0.299
Empathy	0.003	0.959	1.063	0.304
Interactive Quality	0.480	0.489	1.958	0.163
Interactive Frequency	0.073	0.787	1.732	0.190
Interactive Degree	2.181	0.141	0.523	0.470
Brand Image	0.146	0.703	3.254	0.073
Customer Satisfaction	0.137	0.712	6.086	0.014*
Purchase Intention	0.318	0.573	2.245	0.136

\* p < 0.05, \*\* p < 0.01

The user education level is associated with the perceptions of information quality (F=4.169, p=0.042), reliability (F=5.341, p=0.022) and customer satisfaction (F=6.086, p=0.014). The users with higher education level (education level = master degree, Mean = 5.335) perceive that store Facebook fanpage provides the users with greater relevance,

understandability, accuracy, completeness, and timeliness information than lower education level (education level = bachelor degree, Mean = 5.104). The users with higher education level (education level = master degree, Mean = 5.076) perceive that store Facebook fanpage has the ability to perform the promised service in a dependable and accurate manner than lower education level (education level = bachelor degree, Mean = 4.811). The users with higher education level (education level = master degree, Mean = 5.342) perceive that store Facebook fan pages provides users with satisfied services than lower education level (education level = bachelor degree, Mean = 5.032).

## CONCLUSIONS

In this study, SERVQUAL model, information quality and interaction constructs were integrated and employed to examine the users' behaviors on the store Facebook fan pages. Users of different gender and career don't influence the perceptions of service quality, information quality, interaction constructs, brand image, customer satisfaction and purchase intention. The users' age only influences their perceptions of reliability. Older users perceive that store Facebook fan pages have the ability to perform the promised service in a dependable and accurate manner than younger users.

The user education level is associated with the perceptions of information quality, reliability and customer satisfaction toward the store Facebook fan pages. The users with higher education level perceive that store Facebook fan pages provide the users with greater relevance, understandability, accuracy, completeness, and timeliness information than lower education level. The users with higher education level perceive that store Facebook fan pages have the ability to perform the promised service in a dependable and accurate manner than lower education level. The users with higher education level perceive that store Facebook fan pages provide users with satisfied services than lower education level.

This study can lead to several further studies. First, the dependent construct here represents behavioral intention rather than actual usage. Further studies can determine whether intention of continued use and actual usage are strongly associated. A second concern is that the study was empirically assessed in only one context. The generalization of the study results is not known beyond the current sample and the store Facebook fan pages context. However, the proposed research model explains and predicts continued usage behavior. Thus, the store managers of the Facebook fan pages can determine which constructs have the most meaningful impact on users and how to improve users' intention of continued usage.

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