An Empirical Study on e-Loyalty of Social Networking Sites

Ming-Hao Jia* · Dae-Yul Jeong**

I. Introduction

Web 2.0 is the next generation application about the Internet. O’Reilly (2006) proposed a brief definition for web 2.0: “It is the business revolution in the computer industry caused by the move to the internet as platform, and an attempt to understand the rules for success on that new platform.” But, there is not a clear definition for web 2.0 yet. In short, web 2.0 refers to as a perceived second generation of web development and design that facilitates communication, secure information sharing, interoperability, and collaboration on the World Wide Web (http://en.wikipedia.org/wiki/Web_2.0, accessed 21 May, 2009).

The essence of web 2.0 is user generated content (UGC), also known as user created content (UCC) or consumer generated media (CGM). The internet contents what visitors can view were edited by a small number of web masters in web 1.0. Conversely, every visitor can be the constructors in web 2.0.

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* Candidate PH.D., Dept. of MIS, Gyeongsang National University, jiaminghao@hotmail.com
** Corresponding Author, Professor, Dept. of MIS, Gyeongsang National University, dyjeong@gnu.ac.kr
quotes Mayfield, a CEO of a software WIKI Solutions Company: “Web 1.0 was commerce. Web 2.0 is people.” Web 2.0 concepts have led to the development and evolution of web-based communities, hosted services, and applications; such as social networking sites, video-sharing sites, blogs, etc.

Social networking sites such as Facebook, Myspace, Cyworld, Renren and Kaixin001 have an amazing development in recent years. There is a new way to show themselves, share information, connect with friends, and meet new people. Most of the existing articles (Barnes, 2006; Boyd, 2008; Cohen and Leslie, 2008; Dwyer et al. 2007; Fogel and Nehmad, 2009; Lewis et al. 2008; Strater and Richter, 2007) are only concerned about the security and privacy of SNSs. Although the security and privacy are very important factors from user perception, the user loyalty is more important for the corporation in comparison. But, there are no relevant research about user loyalty in SNSs.

The goal of this study is to propose a conceptual framework that customize for user loyalty of SNSs. We begin the study by reviewing the literatures about the relationship between site attractiveness, satisfaction and e-loyalty. Second, we identify some factors that affect the site attractiveness, satisfaction and e-loyalty, and then present a research model and hypotheses. Finally, we test the hypotheses and give out the implications.

In this study, through analyzing the factors that affect the user satisfaction and e-loyalty of SNSs, we propose what factors influence on site attractiveness and user satisfaction, and then examined the direct effect of site attractiveness and satisfaction on user e-loyalty. Furthermore, we tested whether there are mediators among these factors.

II. Theoretical Background

2.1 Social Networking Sites

The basic theory of SNSs is called six degrees of separation theory which is popularized by Guare (1993). It refers to the idea that, the distant between any stranger in the world and you will not be more than 6 peoples. That is, you will be able to know any of a stranger through a maximum of six people if you found the right six people to make the right connection. As shown as Figure 1, there is a little relationship among most of your friends in the traditional interpersonal relationship mode. By contrast, each of your friends could be a transmitter in the SNSs, it allows people make link between new one and their friends. This kind of mode establish a link among these friends each other. Boyd and Ellison (2007) define SNSs as web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded
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system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system.

SNSs is similar with a technology integrated sites. They have provided a variety of features, such as Bulletin(a brief announcement of news or opinion posted on the user’s profile page), Group (a place where people gather online, get updates and show support about specific subjects and interests), Mail(private messages much like e-mail and instead of posting comments on a user’s profile), IM (provides a instant message function for users to chat with

**<Table 1> Some Features of SNSs**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Facebook (CN)</th>
<th>MySpace (CN)</th>
<th>Cyworld (CN)</th>
<th>Renren</th>
<th>Kaixin001</th>
<th>51</th>
<th>Chineren</th>
<th>Qzone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulleting</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Group</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Mail</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Photo</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Music</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Video</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>IM</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Webdisk</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Apps</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Domain Service</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Mobile Support</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

- 3 -
each other), Application (usually third-party application created by other users for entertainment purpose), photos-sharing and etc. Table 1 showed some features of most popular SNSs in China Internet environment. Several of SNSs also provide some characteristic functions. For instance, the Facebook and MySpace which are come from U.S. provide the video upload. The Kaixin001 and Chinaren which are come from China provide the function of webdisk. The 51.com and Qzone which are also provide unmodified domain name service, and the domain name can be modified only once in Myspace. The users are allowed to use domain name service by monthly payment. In contrast, the Cyworld comes from Korea provide this service for free. It is worth mentioning that most of the SNSs have supported the mobile phone accessing. The users can browse the site anytime. The SNSs are keeping ongoing development and also the technology barriers are lower and lower. The site can provides the services what others can. The most critical and difficult thing is constant innovation.

Social networking sites have attracted millions of users and have the potential to fundamentally change our social lives. For examples, most of these users have integrated these sites into the daily practices (Boyd and Ellison, 2007).

2.2 Satisfaction

Oliver (1997) argued that satisfaction is the summary of psychological state resulting when the emotion surrounding disconfirmed expectations is coupled with a consumer’s prior feelings about the consumer experience. Stauss and Neuhaus (1997) defined satisfaction as a cumulative, attitude-like judgment that is based on customers past experiences. It is connected to varying emotional and cognitive states that influence customers’ future behavior towards the company. Following Hunt (1997), Rust and Oliver (1994) and Cronin et al. (2000), the customer satisfaction is described as “an evaluation of an emotion” that reflects the degree to which a consumer believes the service evokes positive feelings. In this research, satisfaction is defined as the contentment of the users during the experience of SNSs. It refers to fulfillment of the user's needs and expectation, and that the web site is perceived as satisfactory overall.

2.3 e-Loyalty

Oliver (1997) also define the loyalty as: “A deeply held commitment to re-buy or re-patronize a preferred product or service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause
switching behavior.” This general definition also appears to apply to online loyalty, or e-loyalty as well. Srinivasan et al. (2002) present the briefer and more specific definition of e-loyalty as “a customer’s favorable attitude toward the e-retailer that results in repeat buying behavior.” Cyr et al. (2005) defined e-loyalty as intention to revisit a web site or to consider purchasing from it in the future. e-Loyalty has been conceived as a consumer’s intention to buy from a web site and that consumers will not change to another web site (Flavian et al., 2006). For research purpose, we define the e-loyalty as the users’ favorable attitude toward the SNSs that result in visiting frequently and/or staying a long time.

III. Research Method

3.1 Research Model

Liu and Arnett (2000) identify four factors that are critical to web site success in e-commerce: information quality, system use, playfulness and system design quality. Delone and Maclean (2003) consider the quality affect user satisfaction from three dimensions: system quality, information quality, and service quality. Based on the above two kinds of viewpoints, Cao et al. (2005) present the web site quality can be addressed via four components: functionality, contents, service and attractiveness. Web site quality should be used to evaluate a web site from a customer’s perspective (Barnes and Vidgen, 2001). In our opinions, we decide four factors which effect on user satisfaction of SNSs: system capability, information relevance, contents value, and site attractiveness. Figure 2 illustrates the research model.
3.2 Hypotheses

Attractiveness consists of the issues of whether the web site are fun to read and subjectively pleasing. No matter how well the content is or how reliable and easy to search the web site is, if users do not find the site appealing, they are not going to spend much time there (Smith and Merchant, 2001). Chen (2001) said playfulness includes the devices that attract the attention of web site users with enjoyable constructs such as online games, software downloads and Q&A. These features enhance communication by helping visitors find or interpret the information presented. Watson et al. (1998) also suggests that online users seek gratification in escape, entertainment and interaction. This suggests that there is a need for web site to motivate customers to participate, promoting customer excitement and concentration, and including charming features to attract customers and to help them enjoy the visit (Liu and Arnett, 2000). The SNSs combine the professional web sites such as specifically providing online music, webpage games, shared video and blogging services together. To user's point of view, whether the site is functional; whether the information a site provide is high quality; whether the content is valuable; could make influence on the site attractiveness. In our study, we examine the site attractiveness from the aspects of system capability, information relevance, and contents value. Thus, the hypotheses are that:

H1a. System capability has a significantly positive impact on site attractiveness.
H2a. Information relevance has a significantly positive impact on site attractiveness.
H3a. Contents value has a significantly positive impact on site attractiveness.

System capability measures the functionality of a web site. For example, whether the system response time can be accepted by the user (Weinberg, 2000); whether the navigation is useful and the user can found what they want quickly (Smith and Merchant, 2001); and whether the users’ personal information can be protected appropriately or not (Zeithaml et al., 2002). Information relevance captures the content issues what provided by web site. It refers to the extent to which the information on the web site is related to the information needs of the customer (Cao et al. 2005). The information on the web site should be informative and updated (Ducoffe, 1996). The SNSs should provide the timely update information. For example, some new applications are developed and available for users, other applications are maintained and updated. These are signs of the SNSs’ competence, and therefore induce satisfaction. In general, the system capability and information relevance offers tangible services for users by site, on which they can base their assessment of the SNSs satisfaction and loyalty.
The contents of SNSs are generated by the users. The users can record any of things they want on their own spaces. They can share information and discuss some popular topics with friends. Peer who has some information can also be aware of his situation. They also can capture the situation of their friends through messages, comments or other channels. The contents of User-Generated Content (UGC) have the uncertainty. Good information will be helpful for other users. On the contrary, there is no significance, and even have a negative impact. Thus, the hypothesis is that: Thus, the hypotheses are that:

H1b. System capability has a significantly positive impact on satisfaction.
H2b. Information relevance has a significantly positive impact on satisfaction.
H3b. Contents value has a significantly positive impact on satisfaction.

Embedding playful features within the web site not only differentiate a site from others, but also enhance the user’s perceived level of satisfaction (Eighmey, 1997). These features will also lead to increased customer activities (Schmidt, 1996). Furthermore, those will enhance the user’s perceived level of loyalty. Thus, the hypotheses are that:

H4a. Site attractiveness has a significantly positive impact on satisfaction.
H4b. Site attractiveness has a significantly positive impact on e-loyalty.

Customer satisfaction is generally considered a major driver of loyalty in e-commerce (Anderson et al., 1994; Ellinger et al., 1999; Oliver, 1980). There are many literatures indicate that satisfaction is likely to increase loyalty (Bolton, 1998; Jones and Suh, 2000; Oliver, 1997; Page and Eddy, 1999; Patterson et al., 1997). Thus, the hypothesis is that:

H5. Satisfaction has a significantly positive impact on e-loyalty.

3.3 Measurements of Variables

The questionnaire initially included 32 measurement items. Table 2 shows the measurements of all variables. For each item, five-point Likert scales which the ranging from 1 = strongly disagree to 5 = strongly agree with 3 = neutral (neither agree nor disagree) as the midpoint were used in this study.

3.4 Sampling Design and Data Collection

The questionnaire was constructed as a web-based survey for one month during the survey period. Wang and Emurian (2005) indicate that the abilities of a web-based survey to allow respondents to feel anonymous and to overcome time and place constraints helped us to reach respondents more easily than using other data collection methods.
Factors | Measurements | References
--- | --- | ---
System Capability | a. The site can be adapted to meet a variety of needs.  
b. The site loads its page fast.  
c. There is very little waiting time between my actions and this site response.  
d. I find this site is easy to navigate.  
e. I feel secure to provide private information to this site.  
Information Relevance | a. The information on the web site is effective.  
b. The site provides timely information.  
c. The information provided by the web site is accurate.  
d. The site has comprehensive information.  
e. The site provides complete information.  
f. The information from this site always up to date. | Barnes and Vidgen (2002), Montoya-Weiss et al. (2003), Loiacono et al. (2007)
Contents Value | a. I can found the solution of problem on this site.  
b. The contents on this site are attractive.  
c. The contents on this site are useful.  
d. I can know the situation of friends via the web site.  
e. The contents on this site can enhance my knowledge.  
f. The contents on this site can enrich my life | Barnes and Vidgen (2002), Wolfinbarger and Gilly (2003)
Site Attractiveness | a. The site has features that are personalized for me.  
b. I can interact with this site in order to get information tailored to my specific needs.  
c. The site allows me to interact with it to receive tailored information.  
d. It’s really fun to enjoy at this site.  
e. I find the applications diverse and innovative.  
f. Overall, I believe this site is playful. | Wolfinbarger and Gilly (2003), Hsu and Lu (2007), Loiacono et al. (2007)
Satisfaction | a. I am very satisfied with the services of this site.  
b. I am very satisfied with the experience of this site.  
c. Compare with other sites, I like this site very much.  
d. Overall, I am very satisfied with this site. | Rust and Oliver (1994), Hunt (1997), Cronin et al. (2000)
e-Loyalty | a. I will visit this site more frequently than others.  
b. I will spend more time on this site than others.  
c. I will often talk about this site with others.  
d. I will recommend this site to others. | Oliver (1997), Hellier et al. (2003)

Internet usage in China is growing fast. As of the end of June 2008, the number of netizen in China reached 2.53 million (No.22 Internet Report from CNNIC, China Internet Network Information Center) and it has become the largest internet users in the world. So, the
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Chinese SNSs will be concerned in this study. The respondents who had been joined SNS at last half year were asked to answer the questionnaire having a familiar SNS in mind.

A total of 283 responses were received. After eliminating incomplete and inappropriate responses (e.g. giving the same rating for all items), 187 usable responses were included in the sample for construct validation and hypothesis test. The detailed descriptive statistics are shown in Table 3.

### Table 3: Descriptive Statistics

<table>
<thead>
<tr>
<th>Measure</th>
<th>Value</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>79</td>
<td></td>
<td>42.2%</td>
</tr>
<tr>
<td>Female</td>
<td>108</td>
<td></td>
<td>57.8%</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 20</td>
<td>6</td>
<td></td>
<td>3.2%</td>
</tr>
<tr>
<td>20–25</td>
<td>113</td>
<td></td>
<td>60.4%</td>
</tr>
<tr>
<td>26–30</td>
<td>66</td>
<td></td>
<td>35.3%</td>
</tr>
<tr>
<td>Greater than 31</td>
<td>2</td>
<td></td>
<td>1.1%</td>
</tr>
<tr>
<td>Level of education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school</td>
<td>3</td>
<td></td>
<td>1.6%</td>
</tr>
<tr>
<td>College</td>
<td>109</td>
<td></td>
<td>58.3%</td>
</tr>
<tr>
<td>Graduate</td>
<td>75</td>
<td></td>
<td>40.1%</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student</td>
<td>107</td>
<td></td>
<td>57.2%</td>
</tr>
<tr>
<td>Office Worker (White-collar)</td>
<td>74</td>
<td></td>
<td>39.6%</td>
</tr>
<tr>
<td>Others</td>
<td>6</td>
<td></td>
<td>3.2%</td>
</tr>
<tr>
<td>Usage Internet per day</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below 3 hours</td>
<td>32</td>
<td></td>
<td>17.1%</td>
</tr>
<tr>
<td>3–6 hours</td>
<td>59</td>
<td></td>
<td>31.6%</td>
</tr>
<tr>
<td>6–9 hours</td>
<td>50</td>
<td></td>
<td>26.7%</td>
</tr>
<tr>
<td>Above 9 hours</td>
<td>46</td>
<td></td>
<td>24.6%</td>
</tr>
<tr>
<td>Frequency of use SNSs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Several times per day</td>
<td>117</td>
<td></td>
<td>62.6%</td>
</tr>
<tr>
<td>Several times per week</td>
<td>43</td>
<td></td>
<td>23%</td>
</tr>
<tr>
<td>Several times per month</td>
<td>12</td>
<td></td>
<td>6.4%</td>
</tr>
<tr>
<td>Long times per login</td>
<td>15</td>
<td></td>
<td>8%</td>
</tr>
</tbody>
</table>

### IV. Data Analysis and Hypotheses test

This study conducted structural equations modeling (SEM) analysis. Both the measurement model and the structural model were assessed using AMOS 7.0 by the maximum likelihood method.

#### 4.1 Measurement Model

The internal consistency reliability was
assessed by the value of Cronbach’s alpha. The Cronbach’s alpha coefficients shown in Table 4 below indicated that each construct in our research model greater than 0.7, the lowest limit for Cronbach’s alpha suggested by Hair et al. (1998).

<table>
<thead>
<tr>
<th>Construct</th>
<th>Item</th>
<th>Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Capability</td>
<td>3</td>
<td>.705</td>
</tr>
<tr>
<td>Information Relevance</td>
<td>3</td>
<td>.719</td>
</tr>
<tr>
<td>Contents Value</td>
<td>3</td>
<td>.759</td>
</tr>
<tr>
<td>Site Attractiveness</td>
<td>3</td>
<td>.746</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>4</td>
<td>.847</td>
</tr>
<tr>
<td>E-loyalty</td>
<td>3</td>
<td>.859</td>
</tr>
</tbody>
</table>

A confirmatory factor analysis (CFA) was conducted to test the convergent validity, discriminant validity and reliability of model constructs. Fit measures used to assess the measurement model included the ratio of $\chi^2$ to the degree of freedom ($\chi^2$/DF), Goodness of fit (GFI), Root Mean Square Residual (RMR), Root Mean Square Error of Approximation (RMSEA), Adjusted goodness of fit (AGFI), Normed Fit Index (NFI), Comparative Fit Index (CFI). As Table 5 shows, all of the indices were matched with the recommended value (Bollen, 1989; Byrne, 1998; Hair et al., 1998; Joreskog and Sorbom, 2003), and provide evidence of good model fit.

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<table>
<thead>
<tr>
<th>Fit Indices (Recommended Value)</th>
<th>Model Indices</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2$/DF ($\leq 3$)</td>
<td>2.219</td>
</tr>
<tr>
<td>GFI ($\geq 0.9$)</td>
<td>.912</td>
</tr>
<tr>
<td>RMR ($\leq 0.05$)</td>
<td>.063</td>
</tr>
<tr>
<td>RMSEA ($\leq 0.08$)</td>
<td>.067</td>
</tr>
<tr>
<td>AGFI $&gt;(\geq 0.8)$</td>
<td>.865</td>
</tr>
<tr>
<td>NFI $&gt;(\geq 0.9$)</td>
<td>.916</td>
</tr>
<tr>
<td>CFI $&gt;(\geq 0.9$)</td>
<td>.953</td>
</tr>
</tbody>
</table>

The composite reliability coefficients for each construct was usually used for assess reliability. The coefficient was generated from standardized parameter estimates obtained from the confirmatory factor analysis (CFA) and calculated using Fornell and Larcker (1981) formula. In our study, the composite reliabilities range from .8684 (e-Loyalty) to .7515 (Site Attractiveness) which exceed the recommended level of .70. The Average Variance Extracted (AVE) measures range from .6896 (E-loyalty) to .5038 (Site Attractiveness) which also exceed the recommended level of .50 (Hair et al., 1998). All of the measured variables were statistically significant (see Table 6). Discriminant validity can be examined by the coefficients of squared correlation between each pair of constructs. As shown in Table 7, every coefficient of squared correlations between two constructs was less than the value of AVE. Therefore, the results of analysis demonstrate convergent validity and discriminant validity of measurement model.
4.2 Structural Model

The structural model was tested for examining the hypothesized relationships in this study. Comparison of all fit indices, with their corresponding recommended values, the value of ratio of \( \chi^2 \) to the degree of freedom (\( \chi^2/df \)) was 1.785, which is with in the suggested value of 3.0. The Goodness of fit (GFI) was .883, which was good, closed with the suggested value of .90. The Root Mean Square Residual (RMR) was .066, closed with the suggested value of .05. The Root Mean Square Error of Approximation (RMSEA) was .065, which was good, below the suggested value of .08. The Adjusted goodness of fit (AGFI) was .840, which was good, exceed the suggested value of .80. The Normed Fit Index (NFI) was .907, which is good, above the suggested value of .90. The Comparative Fit Index (CFI) was .925, which was good, above the suggested value of .90. These results indicated a good model fit. The detail value of indices are shown in Table 8.
Factors | SC | IR | CV | SA | ES | EL
--- | --- | --- | --- | --- | --- | ---
System Capability | (.5197) | | | | | |
Information Relevance | .107** | (.5312) | | | | |
Content Value | .038* | .058** | (.5265) | | | |
Site Attractiveness | .013 | .186** | .231** | (.5038) | | |
Satisfaction | .180** | .269** | .285** | .417** | (.5785) | |
E-loyalty | .041* | .188** | .095** | .393** | .379** | (.6896)

*p<0.05, **p<0.01
Average variance extracted measures are given along the diagonal.

4.2 Hypothesis Test

The path coefficients of the structural model provided direct evidence of hypotheses supported (see Figure 3). Table 9 shows the analysis results of hypotheses test. System Capability has significantly positive impact on satisfaction. The coefficient was .243 (p<0.05, t=2.604), providing support for H1b. Information relevance has significantly positive
An Empirical Study on e-Loyalty of Social Networking Sites

V. Discussion and Conclusion

5.1 Implications

As previously mentioned, SNSs provide most functions that general websites supported, thereby the users are satisfied with these services. According to the result of hypothesis H1a test, it is verified that system capability has significantly positive impact on satisfaction. SNSs are still in a beginning stage in China. Therefore, there is still a big space to improve and the function of these sites still need to be developed. Besides, the barriers of technology are getting lower and lower, the styles of SNSs are commonly the same. Copy from Facebook is quite a popular mode. So, self-characteristic of SNSs becomes an exigent need. Above all, system capability has no significant impact on site attractiveness.
With the development of SNSs, the information provided by sites is not limited to their own activities, message of new features, and notice of system improvements, also with more and more advertising. Inappropriate use of advertising will be lower customer satisfaction, but it will not affect the site attractiveness to users. Therefore, information relevance has significant impact on the site attractiveness. In contrast, information relevance has no effect on satisfaction.

The results of analysis indicate that the purpose of visit to SNSs are concern on getting the messages of friends (71.1%); play the applications (40.6%); shared knowledge or videos (36.9%); publish entries (34.8%); upload photos or videos (25.7%); and other things (5.3%). All of these purposes refer to contents except play the applications or other things. As previous mention, the contents are generated by the users. Therefore, contents value has significant impact on site attractiveness and also has significant impact on satisfaction.

As we described above, most SNSs offer additional features. The users can present themselves by designing their profile. The

<Table 10> Result of Path Analysis

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Site Attractiveness</th>
<th>Satisfaction</th>
<th>e-Loyalty</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Capability</td>
<td>Direct Effect</td>
<td>.133</td>
<td>.243**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Indirect Effect</td>
<td>-</td>
<td>.057</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Effect</td>
<td>.133</td>
<td>.300**</td>
<td></td>
</tr>
<tr>
<td>Information Relevance</td>
<td>Direct Effect</td>
<td>.408***</td>
<td>.174</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Indirect Effect</td>
<td>-</td>
<td>.174**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Effect</td>
<td>.408***</td>
<td>.348**</td>
<td></td>
</tr>
<tr>
<td>Contents Value</td>
<td>Direct Effect</td>
<td>.395***</td>
<td>.243**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Indirect Effect</td>
<td>-</td>
<td>.168**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Effect</td>
<td>.395***</td>
<td>.411***</td>
<td></td>
</tr>
<tr>
<td>Site Attractiveness</td>
<td>Direct Effect</td>
<td></td>
<td>.425***</td>
<td>.415***</td>
</tr>
<tr>
<td></td>
<td>Indirect Effect</td>
<td>-</td>
<td>.141**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Effect</td>
<td>.425***</td>
<td>.556***</td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td>Direct Effect</td>
<td></td>
<td></td>
<td>.331**</td>
</tr>
<tr>
<td></td>
<td>Indirect Effect</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Effect</td>
<td></td>
<td></td>
<td>.331**</td>
</tr>
</tbody>
</table>

*p<0.05, **p<0.01, ***p<0.001
photos can be shared among the friends. The videos can include everything from users. The interesting applications are the good choice to spare time. These features meet the need of majority of the people. In summary, the SNSs should be an attractive place and therefore site attractiveness has significant impact on satisfaction. Also, site attractiveness and satisfaction has significant impact on e-loyalty.

Baron and Kenny (1996) suggested the following steps for mediation: (i) the mediator must be associated with the independent variable. (ii) the independent variable must be associated with the dependent variable. (iii) the mediator must account for significant variance in the dependent variable, over and above that accounted for by the independent variable. In our case, as shown as Table 10, the coefficient of direct effect from site attractiveness to e-loyalty was .415 (p<0.001). The coefficient of indirect effect from site attractiveness to e-loyalty was .141 which is significant(p<0.05). Therefore, satisfaction can be a mediator between site attractiveness and e-loyalty.

Perfect mediation is said to be evident when the addition of the mediator to the independent variable in the regression model results in previously significant relationship between the independent and dependent variable disappearing, as the mediator mops up the variance previously accounted for by the independent variable. In our case, the relation coefficient between information relevance and satisfaction was .348 (p<0.01). As shown in Table 10, the direct effect coefficient between information relevance and satisfaction was not significant. On the contrary, the indirect affect coefficients between them was significant. As a result, site attractiveness can be a mediator between information relevance and satisfaction although information relevance has no significantly impact on satisfaction.

5.2 Limitations and Future Work

Like other researches, our research also has its limitations. First, the survey was conducted using web-based survey. The online survey method was appropriate for collecting data from participants who were free of geographical constraints. For the future research, the sample should be enlarged. Seconds, the e-relationship should be an important factor in SNSs. Boyd and Ellison (2007) indicates that people can create real-life friendships through similar interests or groups in SNSs. As a result, they can establish important social relationships. Future research should attempt to further examine whether the e-relationship can be a moderator variable in research model.

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<한글초록>

소셜네트워킹 사이트의 e-고객충성도에 관한 실증연구

가명호 · 정대율

웹 2.0 기술의 급속한 발전은 인터넷을 통한 커뮤니티 형성을 효과적으로 가능하게 함으로써 소셜네트워킹 사이트(SNS)의 급속한 성장을 가져왔다. 본 연구는 소셜네트워킹 사이트의 고객충성도를 높이는 요인이 무엇이든가를 실증적으로 밝히는데 있다. 연구모형은 세 개의 독립요인(시스템능력, 정보적절성, 콘텐츠 가치)과 두 개의 매개요인(사이트 매력도, e-고객만족)으로 구성되어 있다. 중국인들을 대상으로 한 실증연구 결과 정보적절성과 콘텐츠 가치가 사이트 매력도에 직접 영향을 미치며, 이는 다시 고객만족을 통하여 고객의 충성도에 간접적으로 영향을 미치는 것으로 나타났다. 또한 사이트 매력도는 고객만족과 고객충성도에 강력한 영향을 미치는 것으로 나타났다. 구조모형에 대한 경로분석결과 사이트 매력도는 고객만족도에 강력한 영향을 미치는 것으로 나타났다. 구조모형에 대한 경로분석결과 사이트 매력도는 고객만족도에 강력한 영향을 미치는 것으로 나타났다. 본 연구에서는 소셜네트워크 사이트에서 이 매개변수들을 어떻게 하면 효과적으로 높일 것인가에 대한 다양한 시사점을 제시하고 있다.

Keywords: Web 2.0, social networking sites, satisfaction, e-loyalty, site attractiveness, information relevance, contents value

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