ISSN: 1816-949X

© Medwell Journals, 2017

The Cause-and-Effect Relationship among the Factors of WeChat Use Intent: With a Focus on the Mediating Effect of Empathy

Ji Hye Lee and Seung Yeob Yu
Department of Advertising and Public Relations, Namseoul University 91,
Daehak-ro, Seonghwan-eup, Seobuk-gu, Cheonan-si, 31020 Chungnam, Korea

Abstract: The central purpose of the current study is to identify the factors affecting Chinese netizen's intent to use WeChat, the leading SNS channel in China and to see whether empathy would have a mediating effect on their use intent. For that purpose, a set of influential factors were extracted from an analysis of previous researches and a preliminary test was performed to secure the validity of these factors. As far as the data under analysis is concerned, a survey was conducted to a group of Chinese users of WeChat. The collected data was analyzed by using SPSS/PC+Windows 20.0. Also, the correlation among the factors in turn was examined by performing a covariance structure analysis through AMOS 21.0. It was found that the their use efficacy had a significant effect on empathy and use intent their interactivity also had a significant impact on empathy and use intent. Their inter relationship had a significant effect on empathy but not on use intent their empathy had a significant effect on use intent no mediating effect of empathy was found between use efficacy and interactivity and finally empathy did exert a mediating effect on the relationship between interrelationship and use intent. Such results are expected to be used as a base data for any effort to design strategies to increase the number of users and also to improve the user's use intent.

Key words: WeChat, use efficacy, interactivity, interrelationship, WeChat use intent, empathy

INTRODUCTION

Recent rapid growth of use of smart phones and Social Network Services (SNS) have brought about great changes in the media industry and also in the way how people are connected to each other. SNS users make relationships with a variety of people in the online networks and show various communication behavior and gather and spread various new information through mobile platforms. The development of SNS technology has demolished the barriers between different types of media and changed communication forms in the global media world.

Recent changes in China are extraordinary and they can be witnessed in the use of SNS in every aspect of society. WeiXin (WeChat), the leading SNS in China has shown a rapid growth and it is reported that 80% of smartphone users which might amount to 600 million, use this service (CuriosityChina, 2015). At present, WeChat is considered as an indispensable tool to build social relationship in China. It is now developing into a globalized comprehensive service network it is reaching every corner of the world, adding other services to the list including online shopping, games, marketing,

online payment services through public platforms and combining with other functions such as marketing channels.

Thus, it should be very meaningful to examine the Chinese netizen's use of WeChat to identify their communication behavior. The results of analysis are expected to provide base data and theoretical framework as well. The current research aims to identify the general characteristics of WeChat and analyze the factors affecting the user's use intent. In particular, the cause-and-effect relationship among the influential factors and the mediating effect of empathy will be at the heart of this research. The detailed list of research goals can be summarized as follows.

The first question under inquiry was 'What factors would influence their WeChat use intent?'. The literature review of past researches of general characteristics of SNS found that major factors are use efficacy interactivity and interrelationship. First, a test was conducted to examine the validity of this set of factors. Also, we aimed to see which of these factors affect their intent to use WeChat. Second, we also intended to see which of these three factors-use efficacy, interactivity and interrelationship-influence WeChat user's empathy.

Third, we also discuss and see whether Chinese netizen's empathy would play a mediating role on their intent to use WeChat. Their empathy is a very important variable for their use of WeChat which is a relationship-oriented service. Thus, it would be an important question to identify whether empathy would affect their use intent.

MATERIALS AND METHODS

Theoretical background and hypothesis

WeChat; Relationship-oriented social networking service: Social media refers to an open online platform where an individual can share his or her thought, opinions, experiences and other types of information with others and thus can generate or expand the relationship with others (Boyd and Ellison, 2007). This service is based on technological mechanism that makes personal and public information-sharing (Ban and Lee, 2011).

In general, social media can be categorized, depending on use purposes, into a set of types: communication, collaboration, contents-sharing and entertainment types (Choi and Yang, 2009). Communication in social media mainly aims to maintain a weak level of connection rather than strong connection; users usually share common interests like music, video clips or pictures with acquaintances or express their emotions and whereabouts to produce a new network with strangers (Hong and Oh, 2010).

WeChat, the leading SNS service is an instant messenger application launed by Tencent Group in 2011. One can do a real-time communication via. an online platform by sending and receiving text messages and photos with his or her followers and various networks are supported by the platform. WeChat has already become a new form of socio-cultural trend. The first thing in the morning for many Chinese is to check with WeChat and it is often the last thing to do before they go to bed. Now, their communication behavior have changed so much that they would rather exchange their WeChat ID numbers than their phone numbers (Zhang and Lu, 2015).

WeChat is a relatively closed communication space for social networking service in which an individual can send/receive messages and does various activities of self-expression (Yong and Huai-Cang, 2014). At present, WeChat is the leading SNS network whose members well exceed those of Facebook and Blogs.

Such an explosive growth was possible, since a huge number of users of the PC-based online messenger QQ could also use the mobile platform-based network. The users of WeChat amounted to 300 million in 789 days, since, the service began. Now, it is reported that 80% of smart phone users which means roughly 600 million people, use WeChat service (CuriosityChina, 2015).

As for the age of WeChat users, 86.2% of them range from 18-35. These people are the main class of consumers born in 1980's called post-80 and 1990's called post-90. The general characteristics of this particular group might be explained by such words as individualism and national pride. In particular, this generation has influenced many changes and development in society and has also benefitted from an explosive economic growth ever since China became belonging to G2 after the reform and open-door era. It can be stated that most human networks in China are now working inside the WeChat platform which also has an enormous power in online marketing.

Influential factors for WeChat use intent: The explosive growth of WeChat has brought about various researches on this service from various perspectives. Many researchers have taken WeChat as a new media channel and addressed the issue of changes in the way of communication (Yong and Huai-Cang, 2014). Others have recently aimed to identify the causes of this explosive growth and the influential factors for their use intent.

A few views on the influential factors have been proposed. First, according to the use and satisfaction theory (Katz et al., 1973), for example, mass media users actively consumer the products of media in order to satisfy their personal desires (socio-psychological characteristics). In other words, the followers of this theory would not ask 'What would the media do for or to the media users?' but 'What would the media users do with the media?' That is, the use of media is taken as a goal-oriented active behavior not as a passive behavior. Thus, in this view, the users of WeChat use the service as an active consumption.

Within this theoretical view, the use and satisfaction of WeChat users may come in various areas: their pursuit and sharing of information and consequent satisfaction, satisfaction with their sharing of emotions, satisfaction with self-exposure desires and satisfaction with their privacy (Zhang and Lu, 2015). Also, Zhan and Yan (2014) examined the effect of a set of 6 factors-perceived easiness, perceived usefulness, meeting expectation, perceived interest and satisfaction and reported that only three of them had a significant effect on their continuous use intent: perceived easiness, perceived interest and satisfaction.

Another view is Media Systems Dependency Theory (MSD). According to this theory, media an individual and social environment are all in dependency relationships. The more dependent one becomes on the desires satisfied

by using media, the more powerful the role of media becomes. This theory assumes three stages of a variety of systems: a macro level for social environment and media, a micro level for an individual having a particular goal or stance in social environment and a meso level for interpersonal network.

Next, Innovation Diffusion Theory argues that new ideas, customs, products or services can be communicated among the members of social system in the course of time (Rogers, 1995). Adoption of innovation would mean the process of using innovation and it can be applied to new technology and reception of new media.

Hsu and Lu (2007) argued in their study of the effect of innovation diffusion theory on user's use intent that their use intent is influenced by usefulness, easiness and autonomy and also by an individual's usefulness and receptiveness.

Technology acceptance model (Davis, 1989) in turn, considered perceived usefulness and perceived ease of use as major factors for acceptance of information technology and claimed that attitude established through these elements would affect actual behavior with behavioral intention being a mediating variable (Adams *et al.*, 1992; Agarwal and Prasad, 1997).

Yang and Hu (2009) on the basis of technology acceptance model and network externality theory, analyzed factors affecting mobile use intent. Also, Wu (2013) in the framework of technology acceptance model, presented a research model for WeChat user's acceptance by appealing network externality, perceived pleasure, perceived risk, trust and subjective norms.

However, many researches on the use of WeChat mainly focus on exploratory attempts but very few empirical researches on the user's subjective and psychological perception have been reported in the literature. A few studies have reported analysis of influential factors on the basis of technology acceptance model but more detailed and comprehensive researches are in need (Zhang and Lu, 2015). The current research, thus, attempted to present a comprehensive analysis of the reciprocal relationship among the user's psychological characteristics, the media's characteristics and media environment. The results of analysis are expected to shed light on the factors affecting the user's use intent.

Research model

WeChat use efficacy: Self-efficacy in the Social Cognitive Theory might refer to one's belief in his or her own ability to perform a certain task (Bandura, 1986). In some researches on adoption of innovation, self-efficacy could

be defined as the degree of belief in one's ability to effectively utilize an innovative product or service (Ellen *et al.*, 1991).

In general, expectation for self-efficacy would be necessary in one's effort to decide whether to do and continue to do a certain action. Greater self-efficacy would lead to active participation, otherwise, one would passively participate in the action. In particular, self-efficacy is considered as an important element in most personal relationship or communication as well as online communication (Jerusalem and Schwarzer, 1992).

Also, many researches have reported that self-efficacy which can act as a major factor for choosing a certain behavior and deciding how long one would continue that behavior had a positive effect on one's performance in a specific task (Park and Park, 2009; Eastin and LaRose, 2000). Fan *et al.* (2013) also reported that self-efficacy was the most influential factor on downloading mobile applications followed by perceived entertainment and perceived usefulness being the least.

General self-efficacy reportedly has a positive influence on one's intention to adopt online privacy protection behavior (Yao and Linz, 2008). According to protection motive theory (Rogers, 1983) greater self-efficacy is closely connected with greater protection behavior.

Self-efficacy is a psychological concept closely connected with actual behavior and thus, it is an important concept for explaining communication behavior. Its definition might vary in different researches. For this study, it might be defined as an individual's belief in his or her effective and organized use of WeChat. Based on the results of previous researches, we have extracted the following hypothesis.

- H₁₋₁: use efficacy of WeChat will have a significant effect on empathy
- H₁₋₂: use efficacy of WeChat will have a significant effect on the user's use intent

WeChat interactivity: Interactivity has been recognized as a crucial element in developing online public opinion. It refers to the degree to which conversation partners respond to one another, communication media and posted messages and also, the degree to which such influences occur at the same time (Liu and Shrum, 2002). In other words, it might be defined asthe degree to which participants in communication control their reciprocal talks, so that, exchanges of roles can be possible (Rogers, 1986).

Interactivity has been taken as a property of interpersonal communication but it has been used as a crucial criterion distinguishing traditional media and new media, since, the introduction of various reciprocal media based on the internet (Cho and Leckenby, 1999; McMillan, 2002). Such interactivity can play a very important role of sharing and exchanging opinions/information (Liang and and Lai, 2002). Increased interactivity would lead to greater use of services and eventually increased time in online activities (Hanson, 2000).

Moreover, it was claimed that the speed was the crucial factor directly affecting user's immersion (Novak *et al.*, 2000). Studies of the use of Facebook reported that increasing necessity for continuous mutual relationship would lead to more concentrated immersion of users. Likewise, many researches have found that social interaction with others would have a significant effect on immersion (Chang, 2013).

Interactivity on the social media makes it possible to share information and experiences among users which in turn can lead to accumulation of social capital (Chang and Zhu, 2012). The current research, based on previous studies of WeChat, intends to test the following hypothesis 2:

- H₂₋₁: interactivity of WeChat users will have a significant effect on empathy
- H_{2.2}: interactivity of WeChat users will have a significant effect on their use intent

WeChat interrelationship: Human beings make relationships with others in a way or another to satisfy their desires. In the Self-Decision Theory, relatedness is one of the three basic desires: one should get his or her autonomy, competence and relatedness satisfied in order to grow psychologically, maintain the integrity of character and psychological health (Deci and Ryan, 2000). Maslow also claimed that a sense of belonging is one of the five fundamental desires of human beings whereas Schutz (1966) argued that a sense of belonging, affection and control are the human basic desires that they would like to satisfy through communication with others.

In general, a person with amicable personal relationship and sound mental health is more likely to have a significant effect on his or her self-exposure (Choi and Sin, 2003). Such people are likely to have emotional affection with CMC environment involving both online and offline and develop positive relationship and interaction with others (Park, 2007). Such a phenomenon might be attributable to the assumption that perceptual proximity of feeling in the same cyber

space would lead to emotional intimacy and extroverted establishment of relationship with other people. Also, perception of being together with others would enhance one's internal motivation and enhanced internal motivation would have a positive impact on one's external behavior.

Interrelationship refers to establishment development of lasting relationship with others (Standage et al., 2003). WeChat, a relationship-oriented SNS is a very useful tool to satisfy an individual's desire for interrelationship. This offers a communication environment different from face-to-face situations; the text-based non-simultaneous communication can provide users with ample time to receive or prepare messages and also affect the cognitive process of recognizing the partners and handling the messages (Hancock and Dunham, 2001). Thus, based on these previous researches, the following hypothesis established:

- H₃₋₁: interrelationship of WeChat users will have a significant effect on empathy
- H₃₋₁: interrelationship of WeChat userswill have a significant effect on their use intent

Empathy and WeChat use intent: The present research defines empathy as the degree to which an individual experiences feelings of lower dimension of empathy. In general, greater empathy might mean being more conscious of others and continuous relationship with others would lead to more empathy. Also, considering that the satisfaction element of WeChat user's desire to share emotion with others is found high, empathy should be a very important factor to enhance their satisfaction in establishing social network and a communication network as well. Hypothesis 4-7 would verify this point:

- H₄: empathy of WeChat users would have a significant effect on their WeChat use intent
- H₅: empathy of WeChat users would mediate the relationship between use efficacy and their WeChat use intent
- H₆: empathy of WeChat users would mediate the relationship between interactivity and their WeChat use intent
- H₇: empathy of WeChat users would mediate the relationship between interrelationship and their WeChat use intent

In addition, we have determined the research model based on the assumptions presented in Fig. 1.

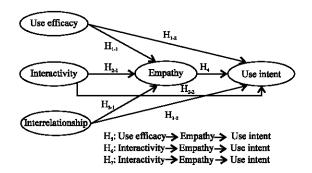


Fig. 1: Research model

RESULTS AND DISCUSSION

Research design: The current research intended to identify the cause-and-effect relationship among the factors affecting user's intent to use WeChat. For that purpose, a set of influential factors were extracted from an analysis of previous researches and a preliminary test was performed to secure the validity of these factors. As far as, the data under analysis is concerned, a survey was conducted to a group of Chinese users of WeChat from September 25-October 5, 2015. In order to reduce regional deviation, an online survey was adopted using the website: http://www.sojump.com/jq/5876800.aspx. A set of 316 responses, eliminating some inappropriate ones from 355 collected ones were used for final analysis.

The collected data was analyzed by using SPSS/PC+Windows 20.0. First, an exploratory factor analysis and a confirmatory factor analysis were conducted, so as to test the validity of the measurement tools: use efficacy, interactivity, interrelationship, empathy and use intent for WeChat. The exploratory factor analysis utilized a primary component analysis and VARIMAX rotation method. The reliability of each scale was verified by using Cronbach α . The correlation among the factors, in turn was examined by performing a covariance structure analysis through AMOS 21.0.

Measurement tools

Use efficacy: Self efficacy under analysis focuses on an individual's belief that he or she can do something with a certain entity (Eastin and LaRose, 2000). Thus, WeChat use efficacy means user's belief that they can do something with the messenger service. In order to measure use efficacy for WeChat, we adopted a slightly modified version of the scale by Davis (1989) and Bae and Kwon (2011). The measurement items include the following statements: 'Using WeChat, I can easily obtain information and contents.', 'Using WeChat, I can obtain useful and interesting information and contents' and

'Using WeChat, I can easily obtain information and contents that I need.' Each measurement item was measured on a 5 point Likert scale (1 point for strongly disagree and 5 points for strongly agree). Cronbach α coefficient was obtained at 0.682 which is good enough.

WeChat interactivity: Interactivity might be defined as the degree to which two or more people respond to one another to communication media and to posted messages and such influences occur at the same time (Rogers, 1986). For the purpose, of the current research interactivity refers to the degree to which one responds to others in the WeChat network. To measure this factor, a slightly modified version of Choi *et al.* (2012). The measurement items are as follows: I actively mention, recommend and comment on other's messages, I often send my news and feelings to others and I often forward information and news to share with others. Each measurement item was measured on a 5 point Likert scale (1 point for strongly disagree and 5 points for strongly agree). Cronbach α coefficient was obtained at 0.712 which is good enough.

WeChatinter relationship: Interrelationship is a psychological desire to have an intimate relationship with others. Here, WeChat interrelationship refers to the degree of relationship with others made in the network. To measure this factor, Deci and Ryan (2000) and Roca and Gagne (2008) scales were slightly modified for the current analysis. The items include the following three statements: I feel being loved by friends in WeChat, I think I am having a good relationship with others in WeChat and I enjoy sharing my feelings with my WeChat friends.

Each measurement item was measured on a 5 point Likert scale (1 point for strongly disagree and 5 points for strongly agree). Cronbach α coefficient was obtained at 0.599 which is good enough.

Empathy: This research defines empathy as the ability to share other people's emotions or feelings. To measure this factor, Heo and Lee (2010)'s empathy scale with a set of 10 items was adopted. Each measurement item was measured on a 5 point Likert scale (1 point for strongly disagree and 5 points for strongly agree). The following statements were used as measurement items: 'I can easily sense whether another person would like to join a conversation', 'I can easily understand what another person is saying and wants to say', 'I find it comfortable to be in another person's shoes', 'I am able to predict what others would feel', 'People tell me that I am good at understanding what others think and feel' and 'I can

easily sense whether others are interested or bored when I talk.' Cronbach α coefficient was obtained at 0.871 which is rather high.

WeChat use intent: This factor refers to the user's intent to continuously use and recommend the service. A set of three items used by Venkatesh and Davis (2000) was adopted for the current analysis. Each measurement item was measured on a 5 point Likert scale (1 point for strongly disagree and 5 points for strongly agree). The measurement items include the following statements: I will keep using WeChat service, I will recommend other people to use WeChat service and I will use WeChat service more often in the future. Cronbach α coefficient was obtained at 0.688 which is good enough.

Exploratory factor analysis: Prior to testing the established hypothesis, the validity and reliability of each component was examined. First, an exploratory factor analysis was conducted to verify the differentiative validity and construction. A principle component analysis method and a varimax rotation technique were adopted for analysis. Each factor was judged as valid if KMO >0.6 and the commonality value >0.4.

The acceptance criterion for the factor load is generally 0.3 but the load >0.4 is normally considered fit and very significant if it is >0.5 (Joseph, 2006). The current exploratory analysis of factors on the other hand, raised the criterion upto 0.6 to secure higher significance. The criterion for the eigen value representing the explanatory power of factors was set at 1.

The reliability of all the measurement scales was examined by using Cronbach's Alpha index, the statistical criterion being 0.7 of Nunnally (1978). The reliability test found the following results. The factor of WeChat use efficacy consisted of 5 items (factor load = 0.642~0.713, total variance explained = 44.316%), eliminating item 4 and 5 whose commonality were lower than the criterion.

The 3 items of WeChat interactivity, in turn, marked the factor load of 0.780~0.832 and the variance explained of 64.249%. The factor load and variance explained of the 3 items of WeChat interrelationship were 0.688~0.789 and 55.778%, respectively. As for empathy, on the other hand, the items whose commonality were lower than the criterion were eliminated and the remaining 8 items showed the factor load of 636~0.784 and the variance explained of 52.805%. The dependent variable of WeChat use intent in contrast was identified as a single factor consisting of 3 items: the factor load = 0.745~0.845, the variance explained = 61.666%.

Test of hypothesis

Goodness-of-fit test of the research model: The present research established a cause-and-effect relationship

model to examine the relationship among the factors influencing the user's use intent: empathy, interactivity and interrelationship. Also, the mediating effect of empathy on the use intent was under analysis. Table 1 shows the goodness of fit of the initial research model.

The test showed that the goodness-of-fit index did not meet the required criterion. Thus, we improved its goodness by eliminating two elements of use efficacy which were identified as observation variables of measurement errors with big MI's (modification indices). The modified research model was found satisfying the acceptance standard. Thus, this research adopted the finalized model as illustrated in Fig. 2 to test the hypothesis. The results of testing the hypothesis under analysis are as illustrated in Fig. 2 and Table 2. First, consider:

 H_{i.i}: WeChat use efficacy will have a significant effect on the empathy of Chinese users

The standardized path coefficient between the two variables was obtained at 0.045 (t = 0.233, p>0.05) which indicates that the effect was not significant enough. Hypothesis 1.2 on the hand was adopted, since, the path coefficient was obtained 0.499 (t = 2.625, p<0.01), supporting the hypothesis that the use efficacy will have a significant effect on their use intent.

Second, Hypothesis 2.1 assumed that the interactivity will have a significant effect on the empathy of Chinese users. The standardized path coefficient between the two variables was -0.069 (t = -0.339, p>0.05) which indicates no significant impact. Hypothesis 2.2, on the other hand was adopted, since, the coefficient between the two variables of the interacitvity and WeChat use intent was obtained at 0.486 (t = 2.819, p<0.01), supporting the positive effect of the former variable on the latter.

Third, Hypothesis 3.1 stated that the interrelationship of Chinese users will have a significant effect on their empathy. This hypothesis was adopted, since, the standardized path coefficient between the two variables was obtained at 0.527 (t = 3.232, p<0.001) which signifies a positive effect of the former factor. Hypothesis 3.2 was in contrast, dismissed, since, the standardized path coefficient was insignificant at 0.103 (t = 0.714, p>0.05) which indicates that the interrelationship would not influence their continuous use intent.

Fourth, hypothesis 4 was tested that the empathy of Chinese users will have a significant effect on their use intent. The standardized path coefficient between the two variables was obtained at 0.302 (t = 3.063, p<0.01) which indicates a positive impact of the former variable. Thus, this hypothesis was adopted.

Table 1: Goodness of fit of the initial and finalized research models

Variables	χ^2	df	p-values	RMR	RMSEA	GFI	AGFI	NFI	CFI	TLI
Initial research model	402.247	179	0.000	0.032	0.063	0.890	0.859	0.848	0.909	0.893
Final version	206.791	120	0.000	0.024	0.048	0.935	0.908	0.902	0.956	0.943
Acceptance criteria	-	-	>0.5	< 0.5	< 0.8	>0.9	>0.9	>0.9	>0.9	>0.9

Table 2: Results of test of hypothesis

Paths	Estimate	SE	CR	p-values	Status
Empathy-Use efficacy	0.045	0.193	0.233	0.816	Rejected
Empathy-Interactivity	-0.069	0.205	-0.339	0.734	Rejected
Empathy-Interrelationship	0.527	0.163	3.232	0.001	Adopted
Use intent-Empathy	0.302	0.099	3.063	0.002	Adopted
Use intent-Use efficacy	0.499	0.190	2.625	0.009	Adopted
Use intent-Interactivity	0.486	0.172	2.819	0.005	Adopted
Use intent-Interrelationship	0.103	0.144	0.714	0.475	Rejected
Use efficacy>empathy>use intent	-0.016	-	-	-	Rejected
Interactivity>empathy>use intent	0.027	-	-	-	Rejected
Interrelationship>empathy>use intent	0.230 (complete mediation	on) -	<u>-</u>	-	Adopted

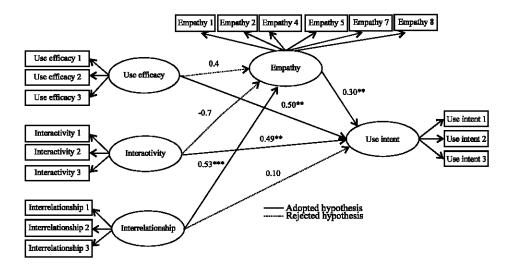


Fig. 2: Finalized research model (**p<0.01; ***p<0.001)

Fifth, Hypothesis 5-7 are concerned with whether empathy would mediate the relationship between the three factors of use efficacy interactivity and interrelationship on one hand and their WeChat use intent on the other hand. The statistical significant of each path coefficient is a crucial criterion for the inquiry. It was found, first, that the standardized coefficient of the direct path from WeChat use efficacy to their use intent was significant at $0.499 \ (t = 2.625, p < 0.01)$ but the coefficient of the direct path to empathy was not significant at $0.045 \ (t = 0.233, p > 0.05)$. Thus, hypothesis 5 was rejected.

The same line of thought applied to test the validity of Hypothesis 6. The standardized coefficient of the direct path from WeChat interactivity to empathy was not significant at -0.069 (t = 0.339, p>0.05), although, the coefficient of the direct path from WeChat interactivity to their use intent was significant at 0.486 (t = 2.819, p<0.01). Therefore, Hypothesis 6 was rejected, failing to identify the mediating effect.

Finally, hypothesis examines the mediating effect of empathy on the relationship between WeChat interrelationship and their use intent. It was found that the standardized coefficient of the direct path from WeChat interrelationship to their use intent was not significant at 0.103 (t = 0.714, p<0.01) whereas the coefficient of the direct path to empathy was significant at 0.527 (t = 3.232, p<0.001). Also, the coefficient of the direct path from empathy to WeChat use intent was significant at 0.302 (t = 3.063, p<0.01), leading us to conclude that empathy has a complete mediating effect and to adopt Hypothesis 7 as shown in Table 2.

CONCLUSION

The central goal of this research was to identify what factors would affect WeChat user's use intent. The set of factors extracted from a literature review-use efficacy,

interactivity and interrelationship were under analysis for their influential power on WeChat use intent. Also, we made an inquiry of whether this set of three variables would affect the empathy of the netizens. Finally, we aimed to identify whether these SNS characteristics had an effect on WeChat use intent.

The results of analysis can be summarized as follows. First, the analysis showed that the use efficacy of the users of WeChat did not exert a significant effect on their empathy. However, it was found that the use efficacy of the users of WeChat had a positive effect on their use intent.

Such a result seems to be in agreement that self-efficacy had a positive effect on one's decision to perform and continue to perform a certain behavior. Thus, in order to enhance their use intent, the company should keep giving their users positive answers to the question of what they can and would do with the services on the platform. One way would be to modify and improve their UI in order to improve the perceived ease of use of WeChat.

Second, it was found that the interactivity of WeChat did not have a significant impact on empathy, either. In contrast, it did have a positive effect on the user's use intent. This result coincides that enhanced interactivity would lead to increased use of services and eventually increased online activities in general. What it means might be that this relationship-oriented service of WeChat should try to keep satisfying an individual's desire for interrelationship with others. In other words, efforts should be made to let the users believe that they can maintain and develop relationships with others and within a community as well.

Third, it was also found that Chinese netizen's interrelationship of WeChat had a positive effect on their empathy. On the other hand, it did not have a significant impact on their intent to use WeChat. It means that users of WeChat showed outstanding empathy ability of understanding other's interests or opinions: they recognize other's intention to participate in the social networking service and tend to place themselves in other's shoes. It might be concluded that the user's continuous use of WeChat was an important key to their empathy ability.

Fourth, it was found that the user's empathy had a positive effect on their use content. Fifth, the hypothesis was tested that the effect of their use efficacy, interactivity and interrelationship of WeChat on their use intent would be mediated by empathy. It was found that the standardized coefficient of the direct path from use efficacy to use intent was significant but the path to empathy was not. Thus, the mediating effect of empathy to use efficacy was not obtained.

Sixth, empathy did not play a mediating role, either, for the relationship between interactivity and use intent, since the standardized coefficient from interactivity to empathy was not significant, although, the coefficient of the path between interactivity and use intent was significant.

Finally, a complete mediating effect of empathy between interrelationship and use intent was identified. The standardized coefficient of the direct path between interrelationship to empathy was significant, although, the coefficient of the path from interrelationship to use intent was not.

Such results are expected to be used as a base data for any effort to design strategies to increase the number of users and also to improve the user's use intent. Further, researches might apply a similar research model to other social networking services such as Facebook. An interesting result is expected to be found in such a comparative analysis.

REFERENCES

- Adams, D.A., R.R. Nelson and P.A. Todd, 1992.
 Perceived usefulness, ease of use and usage of information technology: A replication. MIS Quart.,
 16: 227-247.
- Agarwal, R. and J. Prasad, 1997. The role of innovation characteristics and perceived voluntariness in the acceptance of information technologies. Decis. Sci., 28: 557-582.
- Bae, J.K. and D.S. Kwon, 2011. [An empirical study applying the self-determination factors to acceptance of microblogging service (In Korean)]. Korea J. Bus. Administration, 24: 2745-2774.
- Ban, H. and H. Lee, 2011. Characteristics of political cognitive structure of social media users. J. Commun. Res., 2: 5-43.
- Bandura, A., 1986. Social Foundations of Thought and Action: A Social Cognitive Theory. Prentice Hall, Englewood Cliffs, NJ., USA., ISBN-13: 978-0138156145, Pages: 617.
- Boyd, D.M. and N.B. Ellison, 2007. Social network sites: Definition, history and scholarship. J. Comput. Mediated Commun., 13: 210-230.
- Chang, C.C., 2013. Examining users intention to continue using social network games: A flow experience perspective. Telematics Inf., 30: 311-321.
- Chang, Y.P. and D.H. Zhu, 2012. The role of perceived social capital and flow experience in building users continuance intention to social networking sites in China. Comput. Hum. Behav., 28: 995-1001.

- Cho, C.H. and J.D. Leckenby, 1999. Interactivity as a measure of advertising effectiveness: Antecedents and consequences of interactivity in web advertising. Proceedings of The 1999 Conference on American Academy of Advertising, July 29-30, 1999, American Academy of Advertising, Gainesville, Florida, ISBN-13:978-0931030222, pp: 162-179.
- Choi, M. and S. Yang, 2009. [Internet Social Media and Journalism]. Korea Press Foundation, Seoul, South Korea, ISBN:978-89-5711-237-3, Pages: 269 (In Korean).
- Choi, M.G. and E.Y. Sin, 2003. Interpersonal relationship in adolescece. J. Educ. Psychol., 17: 1-16.
- Choi, S.K., K.T. Kwak and B.G. Lee, 2012. [The study of influential effects of mobile SNS attachment and communication traits to the offline interpersonal relationship change and the SNS interaction (In Korean)]. J. Cyber Commun. Acad. Soc., 29: 159-200.
- CuriosityChina, 2015. WeChat user global report. CuriosityChina, China.
- Davis, F.D., 1989. Perceived usefulness, perceived ease of use and user acceptance of information technology. MIS Quart., 13: 319-340.
- Davis, F.D., 1989. Perceived usefulness, perceived ease of use and user acceptance of information technology. MIS. Q., 29: 319-340.
- Deci, E.L. and R.M Ryan, 2000. The what and why of goal pursuits: Human needs and the self-determination of behavior. Psychol. Inquiry, 11: 227-268.
- Eastin, M.S. and R. LaRose, 2000. Internet self-efficacy and the psychology of the digital divide. J. Comput. Mediated Commun., Vol. 6, No. 1. 10.1111/j.1083-6101.2000.tb00110.x
- Ellen, P.S., W.O. Bearden and S. Sharma, 1991. Resistance to technological innovations: An examination of the role of self-efficacy and performance satisfaction. J. Acad. Marketing Sci., 19: 297-307.
- Fan, Y., Y. Zhang and Z. Zhao, 2013. A study on the mobile application downloading behavior based on self-efficacy theory: Focus on I-phone app store. Inf. Technol. Educ., 4: 125-127.
- Hancock, J.T. and P.J. Dunham, 2001. Impression formation in computer-mediated communication revisited: An analysis of the breadth and intensity of impressions. Commun. Res., 28: 325-347.
- Hanson, W., 2000. Principles of Internet Marketing. South-Western College Publishing, Keene, Texas, USA., ISBN:9780538875738, Pages: 467.
- Heo, J.H. and C.J. Lee, 2010. [Psychometric analysis of the Empathy Quotient (EQ) scale (In Korean)]. Humanities Res., 24: 183-200.

- Hong, S. and J. Oh, 2010. [Comparative analysis on Twitter and Facebook's users access (In Korean)]. Korean Internet Inf. Soc. Conf., 10: 189-190.
- Hsu, C.L. and H.P. Lu, 2007. Consumer behavior in online game communities: A motivational factor perspective. Comput. Human Behavior, 23: 1642-1659.
- Jerusalem, M. and R. Schwarzer, 1992. Self-Efficacy as a Resource Factor in Stress Appraisal Processes. In: Self-Efficacy: Thought Control of Action, Schwarzer, R. (Ed.). Routlegde, Abingdon UK., ISBN:1-560032-269-1, pp: 195-213.
- Joseph, F.H., 2006. Multivariate Data Analysis. 6th Edn., Pearson, Upper Saddle River, New Jersey, USA., ISBN:9780130329295, Pages: 899.
- Katz, E., J.G. Blumler and M. Gurevitch, 1973. Uses and gratifications research. Publ. Opin. Q., 37: 509-523.
- Liang, T.P. and and H.J. Lai, 2002. Effect of store design on consumer purchases: An empirical study of on-line bookstores. Inform. Manage., 39: 431-444.
- Liu, Y. and L.J. Shrum, 2002. What is interactivity and is it always such a good thing? Implications of definition, person and situation for the influence of interactivity on advertising effectiveness. J. Advertis., 31: 53-64.
- McMillan, S.J., 2002. Exploring Models of Interactivity from Multiple Research Traditions: Users, Documents and Systems. In: Handbook of New Media, Liverow, L. and S. Livingstone (Eds.). SAGE Publications, London, UK., pp:162-182.
- Novak, T.P, D.L. Hoffman and Y.F, Yung, 2000. Measuring the customer experience in online environments: A structural modelling approach. Marketing Sci., 19: 22-42.
- Nunnally, J.C., 1978. Psychometric Theory. 2nd Edn., McGraw-Hill, New York, USA., ISBN:9780070474659, Pages: 701.
- Park, S.B., 2007. [A study on emotional attachment for online interpersonal relationships: Focused on the influence of bungae in online community (In Korean)]. Korean J. Journalism Commun. Stud., 51: 407-429.
- Park, W.K. and Y.J. Park, 2009. The relationship between internet self-efficacy and internet digital divide D: Focused on parents-children. Korean J. Journalism Commun. Stud., 53: 395-435.
- Roca, J.C. and M. Gagne, 2008. Understanding E-learning continuance intention in the workplace: A selfdetermination theory perspective. Comput. Human Behav., 24: 1585-1604.
- Rogers, E.M., 1986. Communication Technology: The New Media in Society. Free Press, New York, ISBN: 9780029271100, Pages: 273.

- Rogers, E.M., 1995. Diffusion of Innovations. 4th Edn., Free Press, New York, USA., ISBN:9780028740744, Pages: 519.
- Rogers, R.W., 1983. Cognitive and Psychological Processes in Fear Appeals and Attitude Change: A Revised Theory of Protection Motivation. In: Social Psychophysiology: A Sourcebook, Cacioppo, J.T. and R.E. Petty (Eds.). Guilford Press, New York, USA., ISBN:9780898626261, pp: 153-176.
- Schutz, W.C., 1966. The Interpersonal Underworld. 3rd Edn., Science Behavior Book Inc., Palo Alto, California, Pages: 242.
- Standage, M., J.L. Duda and N. Ntoumanis, 2003. A model of contextual motivation in physical education: Using constructs from self-determination and achievement goal theories to predict physical activity intentions. J. Educ. Psychol., 95: 97-110.
- Venkatesh, V. and F.D. Davis, 2000. A theoretical extension of the technology acceptance model: Four longitudinal field studies. Manage. Sci., 46: 186-204.

- Wu, R., 2013. [A study on the factors influencing wechat users attitude: Based on TAM model theory]. Master Thesis, Shanghai Jiao Tong University, Shanghai, China. (In Chinese)
- Yang, S.D. and C. Hu, 2009. [An empirical study on the acceptance model of mobile users (In Chinese)]. J. BUPT., 11: 33-40.
- Yao, M.Z. and D.G. Linz, 2008. Predicting self-protections of online privacy. Cyber Psychol. Behav., 11: 615-617.
- Yong, W.A.N.G. and L.I. Huai-Cang, 2014. An overview on the research of ontological function of wechat in China and its application. J. Kunming Univ. Sci. Technol., 14: 100-108.
- Zhang, X. and X. Yan, 2014. [A study on influence factors continuous use intention of wechat and utilization and satisfaction (In Chinese)]. Mod. Commun., 11: 130-134.
- Zhang, Z. and C. Lu, 2015. Analysis of wechat usage of Chinese university students. Contemp. Youth Res., 2: 90-94.