Which will you choose, e-mail or WeChat? Media richness, social presence, self-esteem and media preference among Chinese young people

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ABSTRACT

Traditional approach of using media richness and social presence in the study of media preference puts much emphasis on exploring distinctive attributes of certain medium. This exploratory research examined the media preference between WeChat and e-mail by comparing users' perception of these two media from the perspectives of media richness, social presence, and self-esteem. Data were gathered from a sample of 408 young internet users and 83.8% of the respondents preferred to use WeChat. Discriminant analysis showed that four dimensions of media richness (including rapid feedback capacity, natural language conversation, simultaneous capacity, and quicker identity recognition) and four dimensions of social presence (including graphical expression, social context, interactivity capacity, and self-disclosure capacity) were significantly linked to media preference. Linear regression analysis showed that simultaneous factor, rapid feedback, quicker identity recognition, graphical expression, and self-disclosure were significantly related to future adoption. Interestingly, demographic variables such as gender and education level, and media use experience variables were found significantly related to media richness and social presence. Implications for future research will be discussed.

Key words: *WeChat, e-mail, media richness, social presence, self-esteem, media preference*

INTRODUCTION

Computer-mediated communication is the foundation of networking and electronic communities. As the use of new communication technologies continues to proliferate throughout organizations, new modes of interaction between individuals and group emerge, presenting alternative media choices (Rice & O'connor, 1998). Over the years, numerous CMC innovations appeared, such as e- mail, forum, BBS, ICQ, and instant messaging.

Recently, similar to WhatsApp worldwide, instant messaging service is enjoying a boom worldwide. In China, WeChat is one of the most popular instant messaging applications. A research from J.P. Morgan shows that WeChat users' population size is much more than its rivals: population size has reached 480 million in only three years. At the same time, e-mail, as a relatively traditional CMC medium, has not lost its popularity yet. According to a Radicati Group study in May 2009, there were about 1.9 billion e-mail users worldwide. And for 2014, Radicati Group showed that e-mail users have increased to 2.5 billion. In China, statistics from I-research also indicates the popularity of e-mail, which shown in Figure 1.

From Figure 1 we can tell that WeChat users' population size increased dramatically from 2011 to 2013 with an average increase rate of 400% per year, while the e-mail users population size was more stable with a much lower increase rate of 12% per year. Three years after WeChat appeared, its users' population size was larger than e-mail's, while e-mail also held considerable users population. Then an interesting question arises: Since WeChat and e-mail both have a large number of users, which is more preferred by users? In another word, if the users were allowed to use only one medium to communicate with others, which medium will be abandoned then? And why?

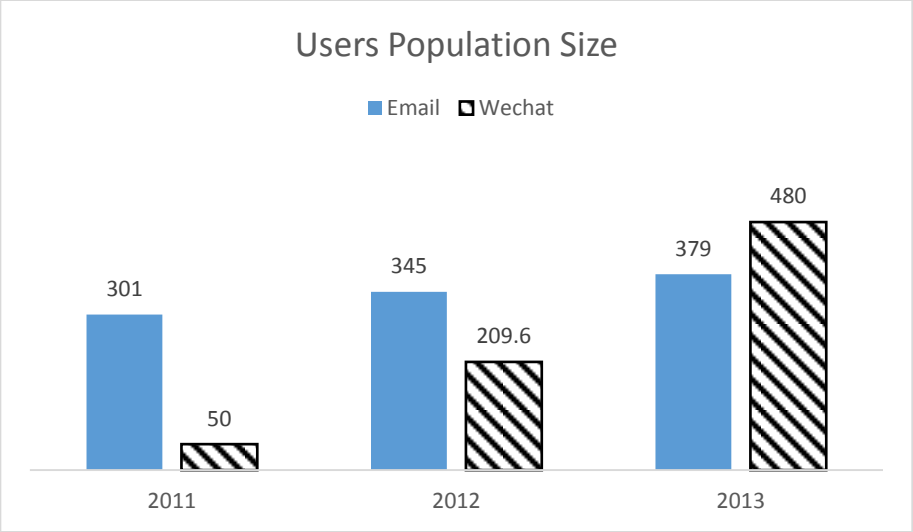

Figure 1: E-mail and Wechat users' population size (Unit: million)
Source: iresearch.com.cn

Decades ago, when online communication was based on text and pictures, e-mail was the main choice for people to communicate online. After instant messaging appeared, people have alternative choice besides e-mail. In China, before WeChat appears, statistics from I-research shows that about 77.9% Internet users adopt e-mail to get contact with others in 2011; and now the permeability of WeChat among Chinese Internet users has reached 90%. From these statistics, we can conclude that people's medium use behavior change over time. Since e-mail is a relatively traditional and early-appeared medium, will it be replaced in the future? Will people still choose e-mail in the future?

Previous media preference studies provide various methods to solve those problems. For example, Joinson pointed out that Internet behavior is a product of both the user and the specific tool (Joinson, 2004). This study will examine people's (1) current media preference between WeChat and e-mail and (2) future adoption intensity by putting concentration on both medium perspective and user perspective. To be specific, this research will compare people's perception

of the two mediums in (3) media richness and (4) social presence capacity, and examine (5) how the perceptions influence users' media preference. Besides. (6) Self-esteem will be a variable to discriminate different participants physiologically. Additionally, (7) Demographic and (8) media usage experience are examined in this study, to explore their relation to media richness and social presence, as well as media preference.

LITERATURE REVIEW

E-mail and WeChat

E-mail is a "text-based and asynchronous computer messaging system which allows written message to be composed and edited on a computer screen and then sent either individually addressed or to a predefined list of recipients" (Rice & Webster, 2002). WeChat, which is called "Wei Xin" in Chinese, was created and put into market by Tencent Technology Company in January 21, 2011. It is comprehensive voice chatting application with multiple functions.

Past researches have shown that the most notable difference between instant messaging versus e-mail is that instant messaging occurs in real time (Lara, 2005). While e-mail is asynchronous, which means e-mail users do not have to be online simultaneously. But WeChat, as an instant messaging, eliminates the "waiting time" associated with e-mails and enables multi-participation in real time (Lo & Leung, 2009).

With E-mail, users can Cc (carbon copy) and Bcc (blind carbon copy) e-mail to others and send attachment along with the main body. And e-mail provides a more useful platform to

do documentation: it's easier for e-mail users to locate and search past information in mailboxes. But for WeChat, although users can also search chat history, disorder of text information and intractability of voice information make it less efficient for documentation. E-mail is visually anonymous, while WeChat provide more functions for users to deliver personal information. Nickname, profile and address in WeChat account indicate users' identification information.

Additionally, WeChat offer many special functions that e-mail cannot. For example, users can directly send voice messages and start video chat with others. And location-based services (LBS) in WeChat enable users to add new friends or acquaintances by allowing them to search the surrounding areas for other WeChat users. Besides, special camera function in WeChat allows people to send his or her picture to others immediately after he or she takes a photo. And games function of WeChat is also very popular among Chinese young people. In the united platform of WeChat, users can play games together with their friends and get a visible list of ranking in a certain game. In light of the compassion, one important question to ask is to find out users' preference between those two widely used CMC.

In this research, data was collected among Chinese young people, ranging from 15 to 30 years old. Blue paper from Chinese Academy of Social Science in 2013 pointed out that WeChat users mainly aged 24 and younger. And for e-mail, statistics from I-research indicated that users below 35 years old use e-mail mainly for social interaction, while older users use e-mail mainly for subscription. To be accurate, this research generally took the Chinese young people as a sample to examine media preference between WeChat and e-mail.

RQ_1: What is the preference between WeChat and e-mail among Chinese young people?

Media Richness

Media richness theory (Daft & Lengel, 1986) describes communication channels as possessing a set of objective characteristics that determine each channel's capacity to carry rich information, with rich information being more capable than lean information of reducing equivocality in a message receiver. All communication medias differ in attributes, which lead to distinct, objective media richness capacity. Media richness, then, refers to channels' relative abilities to convey messages that communicate rich information (Carlson & Zmud, 1999).

In order to reduce ambiguity, specific media are considered to vary in their capability to reduce such ambiguity (Schmitz & Fulk, 1991). And media richness can be measured in four dimensions: (1) the ability to handle multiple information cues simultaneously; (2) ability to facilitate rapid feedback; (3) ability to establish a personal focus; (4) ability to utilize natural language (Daft & Weick, 1984). Media richness theory provides a theoretical framework to describe a certain communication medium by its ability to re-produce the information.

In the CMC context, media richness theory (MRT) assesses interpersonal communication media with their capacity to facilitate shared understanding (Robert & Dennis, 2005). Media richness theory proposes that task performance can be improved when communication media are chosen to better match the information-processing needs of the task (Daft & Lengel, 1986). This proposition has encouraged many empirical studies on media selection. Past media researches have ranked various media: e-mail, tele-conferencing, video conferencing and face-to-face meetings. Among these medium, e-mail is typically considered low in media richness, while face-to-face meetings are high. Although instant messaging, like WeChat is not in the ranking list, some functions of WeChat are very similar with teleconference and videoconference. Currently, researchers also adopt media richness theory to examine e-mail or instant messaging

preference. For example, researchers has pointed out that instant messaging is richer and more synchronous than previous forms of CMC such as e-mail (McQuillen, 2003). IM users can type their exchanges; they can use headsets to have a voice conversation over the Internet; and they can stream video of themselves to other IM users by using a webcam and microphone. Other features unique to IM are the use of sophisticated "avatars," or graphics-based screen "personalities" that mimic the IM user's responses (Kozar & Larsen, 2005).

Other studies linked media richness with media choice and media preference (D'ambra, Rice & O'connor, 1998). Carlson and Davis (1998) investigated the media selection among directors and managers through the use of multiple methods, which applied media richness as a trait theory of media selection, indicating that directors are more "self" oriented while the managers are more "other" oriented. Watson and Bélanger (2007) explored among the multiplicity of media choices, how media is used in the support of communication-based work performed by individuals in complex organizational setting. In addition, Johnson and Cooper (2009) compared media preference between IM and telephone in negotiation, shows that computer mediation reduces both the amount of affect communicated and concession.

Based on previous findings, the following hypothesis is proposed:

H_1: The more people think WeChat are more capable than e-mail in media richness, the more likely for them to prefer WeChat to e-mail.

Social presence

Social presence is a derivative of presence. According to Short, Williams, and Christie (1976), social presence refers to "the degree of salience of the other person in a mediated interaction and

the consequent salience of the interpersonal interaction"; it is the subjective perception of a communication medium's characteristics to foster the social psychological concepts of intimacy and immediacy (Chen & Yen 2004). Despite numerous alternative definitions, the concept of social presence remains unclear. Not only is the concept itself unclear, but it has been used in two distinct ways: to refer to a property of a medium in mediated communication, and to refer to the perceptions, behavior or attitudes of the participants in a mediated interaction (Gunawardena, 1995).

At first, some researchers focused on social presence as a media attribute, namely, the capacity of media to convey information necessary for mediated experience to be perceived as real (non-mediated) (Chen & Yen, 2004; Kehrwald, 2008). From the media richness view, communication medium, which has higher capability to convey verbal and nonverbal information, will be considered more capable to provide higher social presence.

As CMC technology offers a more rich and productive information-exchange platform, which is called lean media (Walther & Burgoon, 1992), researcher thus began to reconsider the definition of social presence. Apart from the description of media attributes, social presence came to be viewed as a quality of relational systems (Amato, Morris & Shin, 2002). Researchers continuously expand the dimension of relational systems. This relational system include a sense of individual's ability to perceive others through their mediated interactions (Murphy & Collins, 1997); the degree of feeling, perception and reaction of being connected by CMC (Guawardena, 1995); and the ability of students to "project both socially and emotionally in a community.

In 2002, Tu pointed out that social presence have three important elements: social context, online communication and interactivity in CMC context (Tu & McIsaac, 2002). There, social

contexts refer to (1) the ability to maintain social relationships (Walther, 1992). And Walther (1992) proposed that different social processes, settings, and purposes are components of social context and affect social presence. Online communication is concerned with the attributes of the language used online and applications of online language (Tu & McIsaac, 2002). This concept is similar as the natural language dimension of media richness. Interactivity includes the activities in which CMC users engage and the communication styles they use. Interactivity referred to the (2) ability to promote effective communication. Self-disclosure also accounts for social presence; it refers to (3) the ability to disclose oneself.

Researchers tried to investigate e-mail and instant message according to social presence theories from different perspectives. In 2002, Keil and Johnson found that social presence of e-mail with the attached audio files was perceived to be higher than social presence of text-only e-mail. Yen and Chen (2004) also examine media selection between e-mail and instant messaging within the perspective of social presence. Since both WeChat and e-mail have multi-modality, the last dimension of social presence is (4) graphical expression, refers to the ability to convey nonverbal clues.

Based on previous findings, the following hypothesis is proposed:

H_2: The more people think WeChat are more capable than e-mail in social presence, the more likely for them to prefer WeChat to e-mail.

Self-Esteem

People's media preference has been examined from a broad range of theoretical and disciplinary perspectives. Psychologists and communication researchers all have their own approach in

studying the determinants of media preference. In psychological field, previous studies have shown the significant influence of individual personality character on their media preference.

Rosengren (1974) highlighted the potentially pervasive impact of "individual characteristics" on all aspects of media selection, use, and consequences and argued that the need to incorporate personality characteristics in future media research seemed "almost self-evident". And personality is also likely to affect the motives underlying media preferences (Weaver & James, 2003). In 2005, Kraaykamp and Eijck examined to what extent do the Big Five personality factors affect media preferences, and re-demonstrated the important influence of personality on media preference.

In the present study, self-esteem, as a trait of personality, also attracts attention of researchers when analyzing media choice behavior. Self-esteem has a clear and well-defined interpersonal element. High self-esteem people tend to adopt a self-enhancement interpersonal strategy, while low-esteem people tend to adopt a self-protection strategy (Joinson, 2004). Joinson (2004) has investigated the relationship between self-esteem and preference for E-mail to face-to-face communication and found that low self-esteem users showed a significant preference toward e-mail compared to high self-esteem users. Ehrenberg (2008) examined the role of self-esteem in university students' use of communication technologies and found that lower self-esteem students spent increased time using instant messaging, compared with telephone.

E-mail and WeChat differ in the extent of asynchronous interaction, visual anonymity, and self-identification disclosure. Since e-mail is relatively asynchronous, visually anonymous, self-documented, and lack of self-identification disclosure, it allows user considerable control over self-presentation (Walther & Joseph, 1996). These aspects of the media are implicitly or

explicitly linked to changes in a psychological state. In this study, self-esteem will be adopted as an independent variable to discriminate individual users, exploring the influence of self-esteem on the preference between e-mail and WeChat.

Based on previous findings, the following hypothesis is proposed:

H_3: People with higher self-esteem are more likely to prefer WeChat than e-mail.

Demographics and user experience

Previous research has demonstrated that some demographic variables are significantly related with media preference. For example, Leung (2001) found the gender differences in the use of ICQ: males used ICQ to fill time between classes while females use ICQ to show or seek affection and to socialize with friends. And one report from CNNIC has pointed out that Internet service preference varies in education level: people who are master degree holder or above prefer to use e-mail than the other. Besides, user experience is another important factor that influence media choice. Individual approval or established perceptions toward communication media are mostly idiosyncratic and contingent upon numerous factors such as task goals or prior technology experience (King & Xia, 2007). And Carlson and Zmud (1999) proposed Channel Expansion Theory (CET) and showed that users' perception of the richness of the communication medium varied according to their experiences and personalities. Additionally, media use motivation also has a significant impact on media preference. Lo and Louis (2007) found that different gratification-obtained can influence people's usage level of different medium.

Thus, in light of the literature reviewed above, three research questions are asked:

RQ_2: What's the influence of perceived media richness, perceived social presence; self-esteem and demographic character on the preference between e-mail and WeChat among Chinese young people?

RQ_3: What's the influence of perceived media richness, perceived social presence; self-esteem and demographic character on the future adoption preference among Chinese young people?

RQ_4: What's the influence of self-esteem and demographic character on various dimensions of (a) perceived media richness, (b) perceived social presence of WeChat and e-mail among Chinese young people respectively?

METHOD

Sampling

The sample was obtained by a combined convenience and snowball sampling strategy. Researcher first established a list of names that are available for this survey and then sent them individual e-mail to invite them to participate in the online questionnaire, which is on http://www.sojump.com/. Then the participants could also spread the questionnaire to another person. And most of the interviewees were from a group of Chinese young people from Mainland China and Hong Kong.

Data in this study was collected with a sample of 408. Among them, 54.4% of the respondents were female, and 45.6% of the responders were male. And 97.8% of the respondents were under 30 years old. From CNNIC report (2013) we can see that among Chinese smart

phone users, 55% are males and 45% are females. And above 70% smartphone users are under 30 years old. Thus, our sample was marginally representative.

Measurement

Perceived media richness: measurement of perceived media richness was assessed in four comparison dimensions: (1) the ability to handle multiple information cues simultaneously; (2) ability to facilitate rapid feedback; (3) ability to utilize natural language (Daft, 1984), and (4) the ability to get quicker video or audio identification. Five-point Likert scale was adopted with 1 stands for "totally disagree", and 5 stand for "totally agree". As shown in Appendix A, three items were used to assess each dimension of media richness with reliability equaled 0.70, 0.81, 0.77 and 0.81 respectively.

Perceived social presence: according to Tu and McIsaac (2002), social presence has four dimensions: social context, online communication, interactivity, and self-disclosure. Every dimension was measured with three items. 5-point Likert scale was used to measure perceived social presence with 1 stands for "totally disagree", and 5 stands for "totally agree". Appendix A contains all items for each dimension with acceptable alpha.

Self-esteem: participants were asked to complete Rosenberg's 10-item self-esteem scale using a five-point Likert scale, with "0" being "not at all" and "5" stands for "very much". The alpha value was 0.85.

Demographic variables: traditional demographic variables were used here: age, gender and education level.

Use experience and motivation: participants were asked about the years of using e-mail and WeChat. And motivation was simply divided into three aspects: for business/study, for personal use and both. Participants were asked to choose one option among the three. And "use for personal" was coded as "0", "business usage" and "both" was coded as "1"

Media preference: there were two items to measure current and future use preference between WeChat and e-mail by asking, "if you should choose only one channel to communicate with others, which one would you choose?" WeChat was coded "1" and e-mail is coded "0"; and "in the future, I will use WeChat more than e-mail", from "1" to "5" is "strongly disagree" to "strongly agree".

RESULTS

Current media preference

In general, 83.8% of them preferred WeChat to email, and only 16.2% of the respondents chose e-mail. As for RQ1, we can conclude that in general, young people in China prefer WeChat than e-mail.

Discriminant analyses were performed to assess how and to what degree perceived media preference, perceived social presence, self-esteem and demographic variables affect the preference between WeChat and e-mail. There were two dependent variables, which measured the current adoption preference and future adoption preference.

Insert Table 1 here

Discriminant analysis showed that four dimensions of media richness including rapid feedback capacity ($p < .001$), natural language conversation ($p < .001$), simultaneous capacity ($p < .001$), quicker identity recognition ($p < .001$); and four dimensions of social presence including graphical expression ($p < .001$), social context ($p < .01$), interactivity capacity ($p < .01$) and self-disclosure capacity ($p < .05$) were meaningful factors related to media preference. Since WeChat preference was coded as "1" and e-mail was coded as "0". We can go further and conclude that the more users think WeChat is more capable than e-mail in media richness and social presence, the more likely for people to prefer WeChat. And the Hypothesis 1 and Hypothesis 2 were supported. Self-esteem ($p > .05$) was not a significant factor related with media preference. Then Hypothesis 3 was rejected.

Future adoption intensity

When it comes to the future adoption preference, about 64.5% of the responders chose they agree or strongly agree with the statement "I will use WeChat more than e-mail in the future."

Linear regression analyses were performed to assess how and to what degree perceived media preference, perceived social presence, self-esteem and demographic variables affect the future adoption preference between e-mail and WeChat.

Insert Table 2 here

The results show that media richness dimensions such as simultaneous ($\beta = .169$, $p < .01$) component, rapid feedback ($\beta = .152$, $p < .05$), and social presence dimensions including quicker

identification (β = .121, $p < .05$), graphical expression (β = .173, $p < .01$) and self-disclosure (β = .166, $p < .01$) were significant predictors of future adoption preference. While e-mail usage years was marginally significant (β = -.09, $p < .06$). Since the statement in the questionnaire is "in the future, I will use WeChat more than e-mail", and from "1" to "5" are "strongly disagree" to "strong agree", we can conclude that simultaneous component, rapid feedback, quicker identification, graphical expression and self-disclosure are positively related with WeChat preference. And e-mail usage time is negatively related with WeChat preference, which means the longer users have used e-mail, the more possible for them to disagree that they will use WeChat more than e-mail in the future. The value of adjusted R Square indicated that this model explained about 32.1% of the variance.

Perceived media richness

The means of four perceived media richness dimensions are 4.0 (simultaneous), 4.1 (rapid feedback), 3.5 (quicker identification) and 4.1 (natural language), which means generally, people have higher perceived media richness for WeChat than e-mail. Linear regression was performed to examine the influence of demographic characters, use experience and psychological factors (such as motivations and self-esteem) on users' perceived media richness.

Insert Table 3 here

From the tables above we can tell that WeChat usage year (β = .190, $p < .001$) is the most significant factor to predict that users have high perceived simultaneous quality of WeChat than

e-mail. The result indicated that the longer users have adopted WeChat, the more possible for them to think WeChat is more simultaneous than e-mail. And Gender (β =-.12, p< .05) is another significant factor. Since female was coded "0" and male was coded "1", then the results indicates that female users considered WeChat are more simultaneous than e-mail when compared with male users.

As for rapid feedback, WeChat usage year (β = .182, p< .001) was also the most significant factor to predict that users perceive WeChat has high capability in receiving rapid feedback than e-mail. And e-mail motivation (β = .182, p< .01) was also significant. Since "use for personal" was coded as "0", "business usage" and "both" were coded as "1", the results indicated that the more people use e-mail for business usage, the more likely for them to think WeChat has high capability in receiving rapid feedback. Also, this model explained 7% of the simultaneous component variance and 7.6% of the rapid feedback variance.

Insert Table 4 here

Results indicate that WeChat usage year (β = .109, p< .05) was the only significant factor to predict higher perceived quicker identification of WeChat. This means that the longer people have adopted WeChat, the more likely for them to perceive WeChat is more capable than e-mail in media richness. And this model explained 3% of the variance.

For natural language, WeChat usage year (β = .181, p<0.001) was also the most significant factor to predict that users perceive WeChat allows people to use more natural language than e-mail. That means the longer users have adopted WeChat, the more likely for

them to think that WeChat allows people to use more natural language than e-mail. Demographic variables, education (β = .156, $p < .01$) and gender (β = -.11, $p < .05$) were significant factors. These indicated that people with higher education background are more likely to think that WeChat allows people to use more natural language than e-mail. While female are more likely to agree this statement than male.

Perceived social presence

The means of four perceived media richness dimensions were 4.0 (graphical expression), 4.1 (interactivity), 3.9 (self-disclosure) and 4.2 (social context), which means generally, people have higher perceived social presence of WeChat than e-mail. Linear regression was performed to examine the influence of demographic characters, use experience and psychological factors (such as motivations and self-esteem) on users' perceived social presence.

Insert Table 5 here

For self-disclosure, WeChat usage year (β = .16, $p < .01$) was the only significant factor, which means the longer users have adopted WeChat, the more likely users thought that WeChat was more capable to help disclose themselves. And this model has explained about 5.1% of the variance.

When it comes to the social context dimension, data showed that WeChat usage year (β = .14, $p < .001$) and gender (β = -.15, $p < .001$) were most significant factors. While WeChat

usage year (β = .14, p< .01) was also significant. That means female and higher-educated users who adopted WeChat earlier would more likely to use WeChat more for social task orientation.

Insert Table 6 here

From the tables above we can tell that gender (β =- .13, p< .01) and education (β =.13, p< .05) are significant factors to predict that users perceived WeChat has high capability to deliver graphical expression than e-mail. This suggested that female and higher education background users are more possible to think WeChat was more capable to deliver graphical information. And this model explained about 6.8% of the variance.

When it comes to the interactivity dimension, data showed that WeChat usage year (β =.189, p<0.001) was also the most significant factor to predict that users perceived WeChat more capable to promote interactivity than e-mail. While Education (β = .15, p< .01), email motivation (β = .13, p< .01) and gender (β =- .11, p< .05) were also significant. Female, higher -educated and users who use e-mail more for business purpose are more likely to perceive WeChat is more capable to promote interactivity than e-mail.

CONCLUSIONS AND DISCUSSIONS

This study adopted perceived media richness, perceived social presence, self-esteem and demographic variables to examine the current media choice and future adoption preference among Chinese young people. This exploratory research re-confirmed the importance of media richness and social presence theory in studying media preference in CMC context.

First, rapid feedback was the only significant factor that influences people to choose WeChat but not e-mail, which indicated that people prefer WeChat because they perceived that using WeChat could get more rapid feedback than e-mail. Technically speaking, both e-mail and WeChat can be simultaneous and get rapid feedback, which means as long as senders send the message, receivers will get notification from e-mail box and WeChat application at the same time. But people still concern more about rapid feedback when differentiating WeChat and e-mail. One important reason may be the common cognition of WeChat and e-mail: in China, people generally recognized that if you get a WeChat message, you should reply it right away and the receivers are expecting your rapid feedback, while for e-mail, the situation is not the same. Then we can conclude that common perception can influence users' perception of different media, although they have similar function.

Thus when it comes to the current media choice, there is only one significant factor which predict WeChat preference, although we can tell from the data that people generally agreed that WeChat have more media richness capacity and higher social presence level. The reason may because that people consider more about other factors than the media attributes. Logically thinking, if one can only choose one medium to contact with others, the number of people they can reach is one important factor. Also, peer pressure may be another important factor. Thus, beyond media richness, social presence and self-esteem, there are more important external and internal factors, which influence media choice. Thus, only rapid feedback was significant, and the comprehensive model can only explain 9% of the media preference variance.

For practical implications, media companies should not only recognize the importance of rapid feedback function of their products, but also pay attention to users' perception of the

products. The visual designation and product promotion can possibly influence the users' perception of media products.

Second, when it comes to future adoption preference, simultaneous component, rapid feedback, graphical expression, self-disclosure, and e-mail usage year were all significant factors. Among these, simultaneous, graphical expression, and self-disclosure were the most powerful factors. These results can explain the boom of WeChat in China in some extent, and indicate what users concerned most when determining future media use intensity.

CMC products with high capability in delivering simultaneous and graphical information, and allowing people to disclose themselves are preferred in the future. These results indicate a trend of CMC products—online-based communication tools will have higher capability and richer multifunction in order to satisfy the users. Media companies can go further in these dimensions to promote products' capability.

Besides, it is interesting to find that some demographic characters and use experience variables are significantly related to the perceived media richness, social presence and media preference. These results indicate that females and lower-educated people are more sensible to the interactivity capacity and social functions of a certain medium. In this way, media companies, especially CMC media companies should pay attention to this phenomenon.

LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

There are limitations in the present research. Firstly, there are only two items to measure preference. This method can only measure the general media preference of users. In the future, researchers can expand the concept of preference. Researchers can focus on the media use

strategy. For example, in what situation people will prefer to use WeChat to e-mail. And the media usage sequence preference, for example, in what context people will switch from using e-mail to WeChat.

Self-esteem was not significant. Future studies may consider other physiological factors, which may influence the media preference between WeChat and e-mail, like different personalities.

Thirdly, the amount of time, which users spend on WeChat and e-mail were not measured in this study. Media use intensity may be a significant factor that influence users' perceived media richness and perceived social presence. Future researchers who concentrate on media preference may include use intensity as a factor to examine the dependent variable.

Fourthly, usage motivation of e-mail and WeChat were simply conceptualized to "for business purpose" and "for personal purpose", that may not be very accurate to clarify the user' exact motivation. Future studies my include some items to really clarify the users' motivation, such as adopting the use and gratifications framework, even can develop scenarios to examine the influence of motivation on the media preference.

Besides, in the literature review we can find that social context is an important dimension when measuring social presence. But the reliability value was rather low, and social context was not a significant factor, which influence the media preference. This may indicate that the construction of the items used in the questionnaire did not fully reflect the difference between WeChat and e-mail. Future studies may include newly developed items to measure this dimension.

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Table 1: Discriminant Analysis of Media Preference between WeChat and e-mail

Predictors	Structure Coefficients
Media Richness	
Simultaneous	.665***
Rapid Feedback	1.000***
Quicker identification	.546***
Natural language	.660***
Social Presence	
Social context	.584**
Graphical expression	.538***
Interactivity	.616**
Self disclosure	.588*
Personal Factors	
Self-esteem	-.154
Email motivation	.008
WeChat motivation	.165
Demographics	
Gender	-.288*
Education	.144
Age	.015
User Experience	
WeChat year	.210*
E-mail year	.198
Eigenvalue	.095
Canonical correlation	.295
Wilk's Lambda	.931
Significance	.000
Group centroids	
WeChat	-.700
E-mail	.135

Notes: To assess media preference, respondents were asked: "If you should choose only one channel to communicate with others, which one would you choose?" where WeChat was coded "1" and e-mail coded "0"
$^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$, $^{\#}p < .06$

Table 2: Linear Regression Analysis of Future Adoption Intensity

Predictors	Future adoption intensity			
	B	(SE)	β	T
Media Richness				
Simultaneous	.217	.079	.169	2.732**
Rapid Feedback	.192	.085	.152	2.246*
Quicker identification	.129	.057	.121	2.262*
Natural language	-.076	.095	-.059	-.800
Social presence				
Social context	.106	.098	.078	1.088
Graphical expression	.024	.087	.173	2.794**
Interactivity	-.114	.102	-.083	-1.123
Self-disclosure	.224	.083	.166	2.703**
Personal Factors				
Email motivation	-.352	.242	-.064	-.145
WeChat motivation	.149	.081	.077	1.834
Self-esteem	-.037	.084	-.019	-.445
User Experience				
WeChat year	.057	.055	.046	1.027
E-mail year	-.101	.052	-.090	-1.942#
Demographics				
Education	.017	.064	.012	.263
Age	-.046	.121	-.016	-.378
Gender (male=1)	-.057	.083	-.029	-.683
R Square			.348	
Adjusted R Square			.321	
F			13.02***	

Notes: Figures are Pearson's r and standardized beta coefficients. R^2 is expressed in percent of variance accounted for.
* $p < .05$, ** $p < .01$, *** $p < .001$, # $p < .06$; N=408

Table 3: Linear Regression Analysis of Media Richness (Simultaneous Capacity and Rapid Feedback)

Predictors	Simultaneous				Rapid feedback			
	B	*(SE)*	*β*	*T*	*B*	*(SE)*	*β*	*T*
Demographics								
Age	-.041	.109	-.018	-.379	-.056	.112	-.024	-.500
Gender (male=1)	-.176	.073	-.117	-2.409*	-.125	.075	-.081	-1.670
Education	.097	.056	.092	1.732	.045	.057	.042	.793
Personal Factors								
Email motivation	-.172	.241	-.040	-.803	.471	.219	.108	2.153*
WeChat motivation	.048	.073	.032	.653	.035	.075	.23	.575
Self-esteem	.067	.076	.044	.883	.028	.078	.018	.357
User Experience								
WeChat year	.183	.048	.190	3.771***	.180	.050	.182	3.624***
Email year	.051	.047	.059	1.103	.086	.048	.097	1.801
R Square			.088				.094	
Adjusted R Square			.070				.076	
F			4.809***				5.193***	

Notes: Figures are Pearson's r and standardized beta coefficients. R^2 is expressed in percent of variance accounted for.
$^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$, $^{\#}p < .06$; N=408

Table 4: Linear Regression Analysis of Media Richness (Quicker Identification and Natural Language)

	Quicker identification				Natural language			
Predictors	**B**	**(SE)**	**β**	**T**	**B**	**(SE)**	**β**	**T**
Demographics								
Age	.090	.137	.033	.656	-.118	.108	-.053	-1.095
Gender	-.130	.091	.071	1.423	-.170	.072	-.114	-2.360*
Education	.031	.070	.024	.440	.163	.055	.156	2.952**
Psychological Factors								
Email motivation	-.085	.268	-.017	-.318	.200	.211	.047	.944
WeChat motivation	.127	.091	.070	1.393	-.010	.072	-.007	-.137
Self-esteem	-.042	.095	-.023	-.443	-.006	.075	-.004	.074
User Experience	.127	.061	.109	2.096*	.174	.048	.181	3.625***
WeChat year	-.012	.058	-.012	-.211	.031	.046	.036	.677
Email year								
R Square			.023				.101	
Adjusted R Square			.003				.083	
F			1.154***				5.595***	

Table 5: Linear Regression Analysis of Social Presence (Self-disclosure and Social Context)

Predictors	Self-disclosure				Social context			
	B	*(SE)*	*β*	*T*	*B*	*(SE)*	*β*	*T*
Demographics								
Age	-.31	.105	-.015	-.300	-.131	.100	-.062	-1.317
Gender	-.079	.070	-.055	-1.132	-.218	.067	-.153	-3.278***
Education	.066	.054	.066	1.228	.235	.051	.235	4.586***
Psychological Factors								
Email motivation	.278	.206	.069	1.353	.138	.195	.034	.709
WeChat motivation	-.044	.070	-.031	-.623	-.007	.067	-.005	-.108
Self-esteem	.042	.073	.029	.572	.051	.069	.035	.738
User Experience								
WeChat year	.143	.047	.156	3.058**	.128	.044	.140	2.888**
Email year	.071	.045	.086	1.573	.062	.043	.075	1.455
R Square			.070				1.53	
Adjusted R Square			.051				.14	
F			3.748***				8.994***	

Notes: Figures are Pearson's r and standardized beta coefficients. R^2 is expressed in percent of variance accounted for.
$^{*}p<0.05$, $^{**}p<0.01$, $^{***}p<0.001$, $^{\#}p<0.06$. N=408

Table 6: Linear Regression Analysis of Social Presence (Graphical Expression and Interactivity)

Predictors	Graphical expression				Interactivity			
	B	*(SE)*	*β*	*T*	*B*	*(SE)*	*β*	*T*
Demographics								
Age	-.121	.101	-.059	-1.203	-.075	.098	-.036	-.764
Gender	-.176	.067	-.127	-2.619**	-.147	.066	-.105	-2.242*
Education	.121	.052	.128	2.402*	.150	.051	.153	2.978**
Psychological Factors								
Email motivation	.222	.197	.056	1.125	.523	.193	.132	2.712**
WeChat motivation	.091	.067	.066	1.348	-.051	.066	-.037	-.782
Self-esteem	.097	.070	.069	1.385	.065	.068	.046	.955
User Experience								
WeChat year	.055	.045	.062	1.234	.170	.044	.189	3.880***
Email year	.064	.043	.080	1.482	.060	.042	.074	1.420
R Square			.086				.147	
Adjusted R Square			.068				.13	
F			4.722***				8.608***	

Notes: Figures are Pearson's r and standardized beta coefficients. R^2 is expressed in percent of variance accounted for.
*p<0.05, **p<0.01, ***p<0.001, #p<0.06. N=408

APPENDIX A: Questionnaire

Media preference
If you should choose only one channel to communication with others, which one would you choose? (1=WeChat; 0=e-mail)

Future use intensity
In the future, I will use WeChat more than e-mail. (1=”strongly disagree”; 5=”strongly agree”)

Perceived media richness (1=”strongly disagree”; 5=”strongly agree”)

(1) Ability to handle multiple information cues simultaneously (Alpha: .70)

1. I can get more immediate response using WeChat than e-mail
2. I can chat with different friends using WeChat at the same time more easily than using e-mail.
3. I feel that WeChat conveys a large amount of information faster than e-mail.

(2) Ability to facilitate rapid feedback (Alpha: .81)

4. I get quicker response from my contact using WeChat than e-mail.
5. I will response to the alert from we chat more quickly than from e-mail.
6. I expect to get quicker feedback when I am using WeChat than e-mail.

(3) Ability to establish quicker visual/audio identification (Alpha: .77)

7. I think the voice message from WeChat is quicker to attract my attention when compared with text-only email.
8. Normally，I will first response to the video and audio message from WeChat, then the text e-mail.
9. I pay more attention on the audio or video message than the audio or video attachment in e-mail.

(4) Ability to utilize natural language (Alpha: .81)

10. With WeChat, I will use more natural language than email.
11. Some of the functions in WeChat allows me feel that I am chatting with a person face-to-face, which email cannot offer.
12. I feel more relaxed when using WeChat than e-mail because of the natural language atmosphere.

Perceived social presence: (1=”strongly disagree”; 5=”strongly agree”)

(1) Social context: (Alpha: .53)

1. I think WeChat is more effective to maintain the relationship with my intimate friends than e-mail
2. If I got conflicting information from email and WeChat, I will choose to trust the information delivered by WeChat.
3. I think e-mail is used more for formal purpose while WeChat for causal purpose.

(2) Graphical expression: (Alpha: .70)

4. WeChat offers more interesting emoticons and stickers than e-mail for me to choose.
5. I use more emoticons and stickers in WeChat than e-mail.
6. I think the emoticons in WeChat helps more to express some abstract and non-verbal feelings to others than e-mail.

(3) Interactivity: (Alpha: .85)

7. I prefer to send/receive shorter message using WeChat than e-mail.
8. Compared with e-mail, I often use WeChat for social purpose because I think in this context WeChat is more efficient.
9. Compared with WeChat, I often use e-mail for formal task because I think in this context e-mail is more efficient.
10.

(4) Willing of self-disclosure (Alpha: .66)

11. I think WeChat is more personal than e-mail.
12. I disclose more personal information in WeChat than e-mail
13. I think functions in WeChat reveal more private information than e-mail.

Self-esteem: (Alpha: .85)

1. On the whole, I am satisfied with myself.
2. At times I think I am no good at all.
3. I feel that I have a number of good qualities.
4. I am able to do things as well as most other people.
5. I feel I do not have much to be proud of.
6. I certainly feel useless at times.
7. I feel that I'm a person of worth, at least on an equal plane with others.
8. I wish I could have more respect for myself.
9. All in all, I am inclined to feel that I am a failure.
10. I take a positive attitude toward myself.

User experience

1. You have used e-mail for __years.
2. You have used WeChat for__ years.
3. I use e-mail mainly for: work, personal, both (choose one).
4. I use WeChat mainly for: work, personal, both (choose one).

Demographics

1. Age: 10-20; 20-30; 30-40; above 40 (choose one)
2. Gender: male; female
3. Education level: High School; Junior college; Bachelor; Master and Doctor (choose one)