

WeChat Uses and Gratifications Among Young Malaysian Adults In Klang Valley, Malaysia

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Abstract: The uses and gratifications (U&G) theory has been widely used in research related to conventional media and now the internet media and mobile platforms. In Malaysia, a number of Internet-related studies revolve around the Technological Acceptance Model (TAM) and most studies on U & G have been conducted in the U.S. and U.K., but not Asia. This study will focus specifically on WeChat, a popular instant messaging platform, to obtain information that will add to the limited research on U & G in Malaysia in the context of the internet media. WeChat was launched in China in 2011 and to date there are 500 million users in China and over 100 million outside China. WeChat was launched in Malaysia in June 2012 and currently it is used by 33% of the total number of Malaysians using instant messaging applications in Malaysia. This study on WeChat and U & G will focus on the following research questions (1) the reasons why respondents use WeChat; 2) the timeframe and duration of respondents; 3) which gratification type do respondents seek the most in using WeChat; and 4) how WeChat usage differ between male and female respondents. This research adopts the quantitative approach, using a sample size of 400 undergraduate respondents who are active We Chat users from four randomly selected private universities in Klang Valley. The research results showed that social gratification is the strongest gratification sought by respondents compared to process and content gratifications. This finding was similar to other social media research done earlier. Results also showed that majority of respondents used WeChat because their friends and family also used it. Most of the respondents have been using We Chat between one to two years. The respondents spent an average of 30min - 1hour (67.75%) on WeChat per-day. There was no statistically significant gender-related differences in WeChat usage and gratifications.

Keywords: social media, usage & gratifications, social motivations, process motivation & content motivation

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I. INTRODUCTION

Mobile phones and their applications have become an integral part of people's life to the extent that without it they tend to feel uncomfortable and incomplete [19]. A research conducted by [1], revealed that the growth of the smartphones globally since 2010 was estimated to be around 78.1%. Bulk of the intensity of the usage of the mobile phones is due to the innovations and the advancement in the phone applications. According to [3], the mobile phones are innovatory, it widely represents a concept swing in the way people communicate and conduct business. In combination with the internet [39], stated that the recent emergence in mobile phone apps has developed opportunities for marketers to link their consumers through download mobile applications. A number of social media experts revealed that mobile applications are one of the most innovative inventions of the current era [41]. Apart from facilitating e-commerce it has also brought social communication and engagement like never before through Facebook, Viber, WeChat, WhatsApp, Twitter and YouTube. [8], stated that mobile phone applications have provided a platform to interact with each other more regularly and at any time.

1.2 Instant messaging applications

[5], stated that mobile instant messaging application is sweeping the entire world specifically among youngsters and teenagers. According to [40], its synchronous nature allows its user to chat with more comfortably and feasibly. [17], stated that the usage of instant messaging began from the emergence of smartphones. However, in recent times instant messaging has become very popular. [31], said that instant

messaging application is used to sustain a small network of fellow Instant messaging users rather than to connect with new ones.

A research by [42] revealed that 27 % people of the surveyed disclosed that they frequently use instant messaging at work, whereas, the remaining 19% mentioned that they used it to send more instant messages to their co-workers rather than e-mails. [10], stated that half of the employees surveyed stated that instant messaging app aid them to be more product and efficient at a workplace. [36], argued that 79% of workers use an instant messaging app for their personal matters. [13] emphasized that instant messaging is widely adopted by a large number of teenagers.

1.2.1 Instant messaging applications and its features.

Whatsapp, founded in the United States of America in 2010 attracts numerous number of people particularly youth [56]. It was illustrated in a study that the maximum number of users of Whatsapp belong to the younger generation between 18 to 28 years old. Whatsapp was purchased by the largest social website i.e. Facebook at the cost of US \$19 billion in 2014.

Another mobile application, Viber, was founded in Israel, this instant messaging mobile application also is available on all smartphone operating systems [30]. This instant messaging mobile application allows users to make video calls, messaging, following of celebrities and brands, and as well group chats [32]. Viber has over 280 million registered users, over hundred million are monthly active users which highlights the great success of an application [49].

Line application was launched in Japan in 2011, it is styled as “LINE” is an instant messaging mobile application. LINE comes under the category of instantaneous communications which enable users to share images, videos, audios, texts, and perform video conferences and VoIP conversations [59]. With a hundred million users, it is also hugely popular. The main features of LINE application include group chats, instant messaging worldwide, video and voice calls for free, social networking services, and variety of expressions inside Sticker Shop [44]. Other features include information about the official accounts of LINE, connection with new applications, and making calls internationally with LINE Out.

Hike mobile application, was introduced on 12 December 2012 in India. This instantaneous messaging service designed specifically for smart phone users which can only be used with the internet connection [22]. Moreover, other than the text messaging, Hike allows users to send emoticons, videos, audios, images, contacts, files, location, and stickers to each other. Hike also permits users to “nudge” which is its unique feature.

WeChat was first launched in January 2011 by Tencent Company in China [35]. The application runs on Blackberry, iPhone, Android, Symbian phones and Windows phones [64]. According to a study by [71] it was revealed that WeChat, as of December 2015 had an approximately one billion created accounts from which almost 650 million accounts are active, making it one of the largest instant messaging application. It was also revealed that 70 million accounts were being accessed from outside of China. The WeChat application provides its users with various features that include video conferencing, video and photograph sharing, text messaging, video games, voice messaging as well as location sharing [69].

WeChat users do not need to pay any fees to subscribe the application as it is free for the lifetime [68]. It also enables users to make group chats with five hundred people and share memories on photo stream which is personal for every user WeChat provides the complete collection of games and facilitates users by language support to translate messages in 20 different languages. According to [67], the WeChat application is not just a text messaging application but it holds its importance more than such messaging applications. WeChat can be seen as a mobile operating system, a portal, and even a platform depending upon how the user looks at it.

1.3 Features of WeChat

As stated above, Whatsapp, Line, Viber and Hike share some similar features such as sending instant messages, videos, audios, and pictures. Some also allow calls and video calls over the internet. WeChat also shares some of these features stated above, but below are some features that make WeChat not just any everyday application. The tremendous demand and success of this application is because of its emphasis on good quality rather than quantity. WeChat can also be used in the market by brands. This however allows users to make their purchase decisions by going through the multiple stages which is done by WeChat’s strong and increasing set of features [43]. In addition, WeChat is making its place so fast in the world and has covered of about twenty counties in the world. Moreover, since its emergence, WeChat has made the life of users much easier especially after launching the walkie-talkie feature which permits to communicate messages even on the way [18].

After the emergence of WeChat application in the market, businesses have started using this application in their business strategies and facing their competitors [9]. Many of the fans and customers find this application an easiest and quickest way to search their favorite brands and stay up-to date with the latest designs and collections. In addition, as stated by [20], the followers get transferred to members by using the functions of WeChat membership because of the loyalty programs run for the individuals. Moreover, the attention of brands

can be grabbed by making their brand logos posted at the personal pages of subscribers. Other than chats, WeChat allows different brands to make their own mini website in which they may share their experiences and also describe their purposes of marketing. WeChat application has a complete set of smart and cool features including "Use Web WeChat." This feature makes this application different from other applications as it enables users to chat contacts even on the computer and just on the mobile phone [60]. Moreover, user does not require to install the application to use this program but only required to write on the browser of desktop about WeChat's website i.e. www.wechat.com

The feature of "Share Only Text on WeChat Moments" allows users to comment or like posts that are shared by their friends on WeChat newsfeed which is same as Facebook's news feed. In addition, there are many WeChat social features that enable users to chat with the random people who are also using the WeChat application. However, according to [9], the feature of "Look Around" facilitates users to make connections with the people who are around users with the physical appearance. In order to use this feature, users need to enable their locations and also shows their profile pictures, statuses, and user's names [58]. In China, WeChat was used for English specific purpose (ESP) training among students, as researchers believed the motivation of students in using the application can serve as learning process for them [27].

1.5 WeChat users in Malaysia

According to [57] Malaysia ranked number one outside China with the most number of users at over 22 million users. Singapore came second with 13 million users, followed by Hong Kong 10 million, Taiwan 5 million, while Indonesia, south Africa, Thailand, Philippines and India makes up 10 million users. WeChat in Malaysia is mostly used individuals aged 16 to 34 years old. It has been notified that WeChat is also used by Malaysian celebrities to respond their fans which makes WeChat more visible in the country [47].

1.6 Problem Statement

WeChat has achieved phenomenal growth in Malaysia and is largely very popular with University/College students. Even in China, where WeChat was created it is very popular among university and college students [25, 33, 66, 64] A number of descriptive studies have been conducted in China to understand motivations behind usage of WeChat however these studies were not theoretically driven. This far no research has been undertaken on WeChat usage in Malaysia and this study aims to fill-in this gap as a preliminary descriptive study which will later be expanded to include other perspectives. This study will be guided by the Uses and Gratifications theoretical framework.

This research will also examine gender differences in usage and gratifications of WeChat.

The research objectives are as follows:

1.7 Aims and Objectives of the Research

- To identify the reasons why students, use WeChat.
- i. To examine the timeframe and duration of the respondents using WeChat.
 - ii. To examine which gratification type do students sought the most while using WeChat.
 - iii. To examine how WeChat U&G differs between genders.

1.8 Research Questions

The research questions based on the objectives are as follows:

- i. For what reasons do students use WeChat?
- ii. What is the timeframe and duration of the respondents using WeChat?
- iii. Which gratification type do students sought the most while using WeChat?

Hypothesis:

- iv. There is a significant difference in gratifications derived from WeChat instant messaging services between male and female undergraduate students

II. LITERATURE REVIEW

Uses and Gratification Model/Theory

The Uses and Gratifications (U & G) theory is a classical theory which explains consumer motivations underlying the use of both both conventional and internet media. This theory is user centric as compared with other media theories which tend to focus on media effects on consumers. [48], state that the U & G theory is a psychological communication perspective that focuses on individual use and choice by emphasizing that different people can use the same mass medium for very different purposes.

[24], in their study found gratifications for using traditional media (radio, television and newspapers) are diversion (the need for emotional release and to escape personal problems); personal relationship (the need for

companionship and help in social interaction); personal identity (the need reassurance of one's role in society and self-understanding); and surveillance (the need for information about factors that might affect or help one) as cited in [11].

[24] proposed three basic tenets in the U & G theory and are as follows:

- a.) Media users are goal-oriented in their behavior
- b.) They are active media users
- c.) They are aware of their needs and select the media to gratify their needs

2.1 Classification of User's Gratification

There exists multiple classification of gratification but for this research the researcher will use [53] U & G classification, as cited in [11], [65], and [7] which refer to content gratification, process gratification and social gratification. [53] classification is relevant and explains all internet based studies on U&G and this includes research done by [37], [28], [38], [50] and [46]. The three classifications are elaborated below:

Content gratification: this gratification type has been defined as the channel/medium utilized for the purpose of communication i.e. messages. These messages could be for the purpose of leisure or information sharing and information content [53]. This gratification is based on the content of the message which might be entertaining or informative [52]. According to [45], the main features on instant messaging include text messaging, voice chatting, video chatting, sharing of files, transferring of files, playing game on messenger such as board games and poker, whiteboard application which share screens of the users and sending and receiving of photos. This ability to share files and play games can be related to gratification indicator such as "Entertainment" and "Escapism". Entertainment, this refers to any event or activity that is particularly developed to entertain others is known as entertainment [16]. Psychological experts have emphasized on the phenomenon that in present era, everyone is ongoing an extremely busy life and do not have time for any extra curriculum activities. Escapism refers to the concept that people due to their frustrations and hectic life causes to leave reality [15].

Process gratification is more on the actual use of the media [52]. This gratification is driven by the actual reason of the user to seek the media, this could be based on the type of media, features of the particular media, or influence of friends or family. Information seeking is seen as a factor here, this refers to any procedure or movement that helps in attaining information either from human being or technology [4]. Many of the users of instant messaging mobile applications find this application an easiest and quickest way to search for their favourite brands and stay up-to date with the latest designs and collections. In addition, [15], indicated that 55% of teenage students get help with their homework by the means of instant messaging applications as well as other necessary information.

Social Gratification; is described as the internal interaction process, where the social gratification within the prevailing social media era is found in using internet and interacting with the world through computer peripherals. This gratification type covers the chatting, friendship, interaction and relationship development [7]. [15], disclosed that instant messaging allows its users to be always connected with their loved ones without any barriers. In a study by [66] stated that one of the attractive features of instant messaging is that it allows the user to carry on more than one conversation at a time, thus it allows users to stay connected with friends and family. According to [70], one of the major reasons people use this instant messaging application is to stay connected with loved ones and as well make new friend, he also explains that this has made instant messaging application a precious communication tool.

2.2 The Uses of Instant Messaging Mobile Application

In a study by [26], instant messaging under the perspective of user and gratification theory explains that instant messaging is used for relaxing, enjoyment, follow fashion trends, desire for making relationships, desire to escape from real world and affection for the close ones. Also, it has been used due to the social needs which are integrated with technological advancements. Instant messaging application is one of the most popular and a successful mobile application. [26], majority of the users of instant messaging application switch the messenger on the basis of desired pleasures. Several other reasons such as information sharing and need to express thoughts and emotions by using the appropriate medium. The versatile, innovative features and benefits of instant messaging differentiate it from other operating mobile applications [57].

Instant messaging mobile application also created an impact on the language of people and especially teenagers as the trend of selecting abbreviations instead of words has been observed. In India for example users use instant messaging application which supports Hindi / Marathi text characters [55]. Also [6], WeChat is not just used by Chinese University students in China just because it enables them to connect with family, build and maintain relationship, play games or even expand their interpersonal relationship, it's a first choice application because it supports Chinese characters.

According to [34], instant messaging has created an impact on the lives of people in social as well as business contexts, especially, the college students. Also, instant messengers were aimed to facilitate users in order to interact with other users while the instant messengers are aimed to enable users in order to interact with the known people from their social circles. Also [12], the instant messaging has evolved with the addition of many useful features such as photos and video sharing. Also, instant messaging sessions have been playing a major role in business world as it provides them to communicate within real time and help them communicate through their body language as well. Moreover, instant messaging is not same as the live chat sessions as it provides privacy to the users and enable them to communicate with their close friends and share personal information. Previously it was not possible to communicate all the meanings due to the limitation of instant messaging as only text could be transmitted and the meanings through gestures and tonal expression could not be communicated. In a study by [62], instant messaging helps in improving relationship, also instant messaging enables users to

2.3 Gender Differences

The research on Internet, U& G and gender differences showed that there are significant differences. [54], identified gender differences in terms of perceived ease of use, usefulness and enjoyment. [14] found men and women differed on their motivations towards internet use, namely social gratifications, information needs and self-efficacy. [63], also found that men used the internet primarily for entertainment and leisure while women for interpersonal communications and educational support [46] found that males and females differ significantly on the gratifications of *self-development, user friendly, wide exposure and relaxations*. [65], in a study on social media usage found there is no statistical evidence to prove there is a difference in male and female use of the media. Most of the research mentioned earlier were on general internet usage and not specifically on instant messaging internet applications, as such this study will evaluate if there are gender differences in the use of WeChat.

III. METHODOLOGY

This study aims to uncover motivations and usage trends of WeChat users in Malaysia. This is primarily a descriptive study which will utilize a survey approach to elicit the required data for this study. WeChat is predominantly used by university students of Chinese ethnicity in Malaysia, as such the respondents for this study will be University students who are Malaysian Chinese, WeChat user and pursuing degree programmes in local private universities. Four private universities were randomly selected namely Segi College University, HELP University, Taylor's University and Universiti Tunku Abdul Rahman (UTAR). A purposive sampling approach was used to ensure only Malaysian Chinese Students were selected. A sample size of 400 students was sufficient to represent the total population of 53,629 based on the sample size formulae and table provided by [21]. The questionnaire for the survey was adapted from [65] who conducted a similar study on social media and U & G usage in Malaysia. The questionnaire consists of four sections. Section one consists of 13 general questions on WeChat usage patterns. Section 2 consists of 7 questions on content gratifications. Section 3 consists of 9 questions on process gratification and the last section on social gratification consists of 8 questions. All questions were based on 5 point Likert scale. To ensure validity and reliability a pilot-test using 40 respondents was conducted and the alpha Cronbach results are as follows: General We Chat trends (section 1) 0.821; Section 2 on Content gratifications 0.687; Section 3 on process gratifications 0.873 and Section 4 on social gratification 0.715. Both the pilot test and the main survey was carried out in the selected university campus grounds. SPSS IBM V23 was used to obtain the descriptive statistics for this study and a T-test was carried out to evaluate if there were any significant differences in gender gratifications of the WeChat.

IV. FINDINGS/DISCUSSION

Demographic findings

A total number of 400 local Chinese respondents were used, chosen from four local private universities in Klang Valley. The male and female distribution are as follows Males make up 214 which is (53.50%) and the females 186 which is (46.50%). The age distribution was based on 18 – 30 because the respondents were university students. Majority of the respondents were aged from 18 to 22 years old (81%). A total of 80.75% of the respondents were undergraduate students, and the rest 20.25 % are foundation and post-graduate students respectively. In terms of number of years as WeChat users, 31.75% of the respondents have been WeChat users from 1 to 2 years; 21.25% from 2 years to 3 years and 3 years or more 30.00%. In terms of usage per day a total of 67.75% of the respondents used WeChat between 30 minutes and 1 hour on the average per day.

Research question two queried on what were the main reasons for WeChat usage. The mean score analysis showed that highest mean score (3.70) was for the statement "I use WeChat because my friends and family are using it". The top five statements for which the respondents use WeChat are thus: 1) I use WeChat because my friends and family are using it; 2) I use WeChat because it allows me to make video calls; 3) I use

WeChat because it supports my language: 4) WeChat is easy to asses: 5) I use WeChat because its user friendly The lowest mean score (2.89) which shows majority of the respondents don't agree is "WeChat is better than other mobile instant messaging application". Research question three on the three types of gratification revealed the following results: For *process gratification* showed that the highest mean score (3.35) was for convenience of use. The second highest mean score (3.20) was for cost effectiveness and the lowest mean score (2.65) indicated that the respondents do not agree that they use WeChat to search for information. For *content gratification* the highest means score (3.34) showing majority of respondents agree to "I Chat anywhere and anytime". The second highest mean score (3.20) indicated that a good number of respondents agree to "I enjoy making video calls" on WeChat. The lowest mean score (2.42) was for "I use WeChat to play games". For social gratification section the highest mean score was (3.62) for the statement 'I Chat to connect with their friends and family'. The second highest mean score (3.55) indicated that a good number of respondents agree they use WeChat to maintain personal relationship with friends and family. While the lowest mean (3.03), was on the statement I Chat to make new friends.

Overall social gratification registered the highest mean score (3.308), followed by process (2.997) and content gratification (2.964). The findings on social gratification being a strong motivator is similar to the descriptive study on WeChat in China by [66]. The two highest mean score statements from each of the gratification are as follows: content gratification: 1) I can use WeChat anywhere any time: 2) I use WeChat to make video calls. Social gratification: 1) I use WeChat to connect with friends and family: 2) I enjoy using WeChat. Process gratifications; 1) WeChat is convenient to use: 2) WeChat is a cost effective way to publish.

To the question on gender differences on process, content and social gratifications the T-test results showed that there was no significant gender difference in all three types of gratifications (process: $p > 0.462 > 0.05$; Content $p > 0.507 > 0.05$ and social $p > 0.083 > 0.05$) as such hypothesis H1: There is a significant difference in gratification derived from WeChat instant messaging services between male and female undergraduate students will not be accepted.

The table 1.0 Explains the t-test outcomes.

Levine's Test of Equality of Variances		F	Sig.	t	df	Sig. (2-tailed)
Process gratification	Equal variances assumed	0.542	0.462	-1.124	398	0.261
Content gratification	Equal variances assumed	0.442	0.507	-1.840	398	0.067
Social gratification	Equal variances assumed	0.083	0.773	-0.474	398	0.636

This result also corresponds with that of [65] who did not find any significant difference in the gender U&G of social media. Also [2], could not find a significant difference in gender-related, as to online sharing of personal information. [29], when it comes to assessing a social media profile editing and tagging photos there is also no significant difference between male and female. It's really a rare thing to come across a literature which illustrates the difference in gender, the social media, and internet mobile application is for all in fact subsequent research shows more female respondents than male.

V. LIMITATIONS AND RECOMMENDATIONS FOR FUTURE STUDIES

This research provides a descriptive perspective of WeChat users motivations for using this instant messaging service, however the findings cannot be generalized because the sample selection was limited to four private universities. Future research can consider obtaining sample from all universities in Malaysia both public and private. It is also recommended that a comparative research be done between the popular instant messaging platforms such as Whatsapp and Line to understand usage and gratifications patterns.

REFERENCES

- [1]. Abolfazli, S., Sanaei, Z., Gani, A., Xia, F., & Yang, L. T. (2014). Rich mobile applications: genesis, taxonomy, and open issues. *Journal of Network and Computer Applications*, 40, 345-362.
- [2]. Acquisti A., Gross R. (2006) Imagined Communities: Awareness, Information Sharing, and Privacy on the Facebook. In: Danezis G., Golle P. (eds) Privacy Enhancing Technologies. PET 2006. Lecture Notes in Computer Science, vol 4258. Springer, Berlin, Heidelberg
- [3]. Boone, L & Kurtz, D. (2013). *Contemporary marketing*. Cengage Learning.
- [4]. Case, D. O. (2012). *Looking for information: A survey of research on information seeking, needs and behavior*. Emerald Group Publishing.

- [5]. Cassidy, W., Brown, K., Jackson, M.(2011) Moving from cyber-bullying to cyber-kindness: What do students, educators and parents say? In: Dunkels, E., Franberg, G.-M., Hallgren, C. (eds) Youth culture and net culture: Online social practices, Hershey, NY: Information Science Reference, pp. 256–277.
- [6]. Chen-lei1, M. (2015). Analysis of WeChat Behavior of Chinese University Students . 5th International Conference on Education, Management, Information and Medicine (EMIM 2015).
- [7]. Chigona, W., Kankwenda, G., &Manjoo, S. (2008). The uses and gratifications of mobile Internet among the South African students. Management of Engineering & Technology, 2008. PICMET 2008.Portland International Conference on, 2197-2207.doi:10.1109/PICMET.2008.4599842
- [8]. Chin, E., Felt, A. P., Greenwood, K., & Wagner, D. (2011, June). Analyzing inter-application communication in Android. In Proceedings of the 9th international conference on Mobile systems, applications, and services (pp. 239-252). ACM.
- [9]. Dai, S., &Zhang, X. (2015). The functionalities of mobile applications: case study: WeChat.
- [10]. Davenport, H. T., & Dyche, J. (2013). Big Data in Big Companies, Retrieved January 5, 2015 from <http://www.sas.com/resources/asset/BigData-in-Big-Companies.pdf>
- [11]. Davis, M. J. (2011). An application of uses and gratifications theory to compare consumer motivations for magazine and Internet usage among South African women’s magazine readers. Southern African Business Review Volume 15 Number 1 2011, 1-27.
- [12]. Day, D.R. & Dutta, R., (2006) Using video image analysis to automatically transmit gestures over a network in a chat or instant messaging session. International Business Machines Corporation
- [13]. Dolev-Cohen, M., & Barak, A. (2013). Adolescents' use of instant messaging as a means of emotional relief. Computers in Human Behavior, 29, 58-63
- [14]. Farfaglia, G.P., Peters, L., Dekkers, D.C., and Park, H.S.(2005). Gender differences in the uses and gratifications of internet use for the United States, the Netherlands, and South Korea. A paper presented at ASSA.AEA. Annual Meeting January 7- 9, in Philadelphia, Pennsylvania.
- [15]. Garde-Hansen, J. & Gorton, K. (2013). Emotion online: theorizing effect on the internet. Palgrave Macmillan.
- [16]. Getz, D., Andersson, T., Vujicic, S., & Robinson, R. N. (2015). Food Events in Lifestyle and Travel. Event Management, 19(3), 407-419.
- [17]. Grellhesl, M., & Punyanunt-Carter, N. M. (2012.) Using the uses and gratifications theory to understand gratifications sought through text messaging practices of male and female undergraduate students. Computers in Human Behavior, 28(6), 2175-2181. doi: 10.1016/j.chb.2012.06.024
- [18]. Guo, Y., Zhang, L., & Chen, X. (2014). Collaborative privacy management: mobile privacy beyond your own devices. In Proceedings of the ACM MobiCom workshop on Security and privacy in mobile environments (pp. 25-30). ACM.
- [19]. Holzer, A., &Ondrus, J. (2011). Mobile application market: A developer’s perspective. Telematics and informatics, 28(1), 22-31.
- [20]. [Huo et al., 2014](#) B.-X. Huo, J.B. Smith, P.J. Drew Neurovascular coupling and decoupling in the cortex during voluntary locomotion J. Neurosci.: Off. J. Soc. Neurosci., 34 (2014), pp. 10975-10981,
- [21]. Israel, G. D. (2016). Determining sample size. Retrieved January 14, 2016, from <http://edis.ifas.ufl.edu/pdf/PD/PD00600.pdf>
- [22]. Kale, H., Rane, G., Shende, S., &Shinde, S. (2014). Short Message Service: Offline Notification System through Bulk SMS for Android Application.
- [23]. Katz, H., Blumler, J. G., &Gurevitch, M. (1974). Uses and gratifications research. The Public Opinion Quarterly, 37(4), 509-523. Retrieved March 20, 2016, from JSTORE database
- [24]. Katz, H., Gurevitch, M. & Haas, H. (1973). On the use of the mass media for important things. American Sociological Review, 38(2), 164-181. Retrieved March 20, 2016, from JSTORE database
- [25]. Khan, A., &Ahrwar, K. (2011). Mobile cloud computing as a future of mobile multimedia database. International Journal of Computer Science and Communication, 2(1), 219-221.
- [26]. Li, H., Mantymaki, M. & Zhang, X. (2014) Digital Services and Information Intelligence, Springer.
- [27]. Liu, Z. (2014). A Study on the Application of WeChat in ESP Training, Vol. 4, No. 12. Theory and Practice in Language Studies, 2549-2554.
- [28]. Luo, X. (2002). Uses and gratifications theory and e-consumer behaviors: A structural equation modelling study. Journal of Interactive Advertising, 2(2). Retrieved March 20, 2016, from <http://www.jiad.org/article22>
- [29]. Madden, M. & Smith, A. (2010). Reputation management and social media. Retrieved from <http://pewinternet.org/Reports/2010/Reputation-Management/Part3.aspx?view=all>
- [30]. Mahajan, A., Dahiya, M. S., &Sanghvi, H. P. (2013). Forensic analysis of instant messenger applications on android devices. arXiv preprint arXiv:1304.4915.

- [31]. Manago, A. M., Taylor, T., & Greenfield, P. M. (2012). Me and my 400 friends: the anatomy of college students' Facebook networks, their communication patterns, and well-being. *Developmental Psychology*, 48(2), 369–80. doi:10.1037/a0026338
- [32]. Mantelero, A. (2014). Toward a New Approach to Data Protection in the Big Data Era.
- [33]. Mao, C. (2014). Friends and Relaxation: Key Factors of Undergraduate Students' WeChat Using. *Creative Education*, 5, 636-640. <http://dx.doi.org/10.4236/ce.2014.58075>
- [34]. Márquez, J., (2003) The effect of Instant Messaging on the Social Lives of Students Within College Dorm. Mercury Project.
- [35]. Millward, S. (2013, may 21). WeChat now has 50 million users outside of China. *TechinAsia*. <https://www.techinasian.com>
- [36]. Muscanell, N. L., &Guadagno, R. E. (2012). Make new friends or keep the old: Gender and personality differences in social networking use. *Computers in Human Behavior*, 28, 107-112.
- [37]. Papacharissi, Z., & Rubin, M. A. (2000). Predictors of internet use, *Journal of Broadcasting & Electronic Media*,44(2), 175-196.
- [38]. Parker, J.B., and Plank, E.R.,(2000). A uses and gratifications perspective on the internet: as a new information source. *American Business Review*, June, 43-49.
- [39]. Persaud, A., &Azhar, I. (2012). Innovative mobile marketing via smartphones: are consumers ready? *Marketing Intelligence & Planning*, 30(4), 418-443.
- [40]. Pielot, M., de Oliveira, R., Kwak, H., & Oliver, N. (2014) Didn't You See My Message? Predicting Attentiveness to Mobile Instant Messages. Poster presented at CHI 2014, Toronto, Canada. <http://dx.doi.org/10.1145/2556288.2556973>
- [41]. Piller, Frank T. and Vossen, Alexander and Ihl, Christoph, From Social Media to Social Product Development: The Impact of Social Media on Co-Creation of Innovation (December 21, 2011). *Die Unternehmung*, Vol. 65, No. 1, 2012.
- [42]. Piwek, L., &Joinson, A. (2016). What do they Snapchat about? Patterns of use in time- limited instant messaging service. *Computers in Human Behavior* Volume 54, 358–367.
- [43]. Pun, R. (2015). WeChat in the library: promoting a new virtual reference service using a mobile app. *Library Hi Tech News*, 32(6), 9-11.
- [44]. Rai, H. G., Deepak, K. S., Syed, S., & Krishna, P. R. (2012). A Smart Mobile Application for Identifying Storage Location of Small Industrial Assets. In *Mobile Data Management (MDM), 2012 IEEE 13th International Conference on* (pp. 332-335). IEEE.
- [45]. Rittinghouse, J. &Ransome, J.F. (2005) *IM Instant Messaging Security*, Elsevier
- [46]. Roy, S. K. (2009). Internet uses and gratifications: A survey in the Indian context. *Computers in Human Behavior*, 25(4), 878-886. doi:10.1016/j.chb.2009.03.002
- [47]. Samat, M. F., Hashim, H., & Yusoff, R. N. R. (2014). Endorser Credibility and Its Influence on the Attitude Toward Social Media Advertisement in Malaysia.
- [48]. Severin, W.J., and Tankard, W.J.(1997). Communication theories in the 21st century, *Mass Communication and Society*, 8 (1), 3-37.
- [49]. Skalen, P., Aal, K. A., &Edvardsson, B. (2015). Cocreating the Arab Spring Understanding Transformation of Service Systems in Contention. *Journal of Service Research*.
- [50]. Song, D., Wang, Y., & You, F. (2014, November). Study on WeChat User Behaviors of University Graduates. In *Digital Home (ICDH), 2014 5th International Conference on* (pp. 353-360). IEEE.
- [51]. Song, I., Larose, R., Eastin, S.M., and Lin, A.C.(2004). Internet gratifications and internet addiction: On the uses and abuses of new media. *Cyber Psychology & Behaviour*, 7(4), 384-394.
- [52]. Stafford, T. F. (2009). Motivations for Internet use. *Encyclopaedia of Information Science and Technology*, 2716-2720. doi:10.4018/978-160566-026-4.ch433
- [53]. Stafford, T. F., Stafford, M. R. &Schkade, L. L. (2004). Determining uses and gratifications for the Internet. *Decision Sciences*, 35(2), 259-288. Retrieved July 2, 2009, from ABI/INFORM Global.
- [54]. Teoh, S.H., and Lim, K.G.V.(1997). Usage patterns and perceptions of the internet: the gender gap, *Equal Opportunities International*, 16(6/7), 259-288.
- [55]. Vaishali Waghmare, M. N. (2014). Hindi / Marathi Text Messenger for Android. *International Journal of Scientific Engineering and Technology*, Volume No.3 Issue No.3, pp : 302-305 .
- [56]. Van Dijck, J. (2013). *The culture of connectivity: A critical history of social media*. Oxford University Press.
- [57]. Walkthechat. (2015). WeChat outside China: what are the growth opportunities? China : <https://walkthechat.com/wechat-outside-china-what-are-the-growth-opportunities/>.
- [58]. Wang, F., Zheng, P., Freeman, B., & Chapman, S. (2014). Chinese tobacco companies' social media marketing strategies. *Tobacco control*, tobaccocontrol-2014.

- [59]. Wang, J., Yu, W. C. W., & Wu, E. (2013). Empowering mobile assisted social e-learning: Students' expectations and perceptions. *World Journal of Education*, 3(2), p59.
- [60]. Wang, Y., Li, Y., & Tang, J. (2015). Dwelling and Fleeting Encounters: Exploring Why People Use WeChat-A Mobile Instant Messenger. In *Proceedings of the 33rd Annual ACM Conference Extended Abstracts on Human Factors in Computing Systems* (pp. 1543-1548). ACM.
- [61]. Watson, J. (2001). How to determine a sample size. Retrieved march 22,2016, from <http://extension.psu.edu/evaluation/pdf/TS60.pdf>
- [62]. Weeks, L.K. (2008). The Role of Text Messaging and Instant Messaging in the Mediation and management of peer-to-peer friendship, ProQuest.
- [63]. Weiser, B.E.(2000).Gender differences in internet use patterns and internet application preferences: A two sample comparison, *Cyber Psychology & Behaviour*, 3(2), 167-178.
- [64]. Wenlong, D., Guanghui, X., &Xianyong, F. (2015). The Analysis and Research on the User Behaviors of We Chat from College: A Case Study of Xi'an Aeronautical University. *Research on Library Science*, 3, 012.
- [65]. Wui, k. L. (2013). Social media uses and gratifications among young adults in Klang valley, Malaysia. *Sungia long: Utar library*.
- [66]. Xi, Y. Z., and Abdul Razaque Chhachhar (2016). Descriptive analysis regarding use of WeChat among university students in China. *Asian Social Science* 12(2),151- 157.
- [67]. Xu, J., Kang, Q., Song, Z., & Clarke, C. P. (2015). Applications of Mobile Social Media: WeChat among Academic Libraries in China. *The Journal of Academic Librarianship*, 41(1), 21-30.
- [68]. Yang, Q. L., Wei, Q., Huang, Y., Jiang, Y. X., Chen, D. Z., Huang, P., & Liang, L. J. (2015). The application of multimedia messaging services via mobile phones to support outpatients: Home nursing guidance for pediatric intestinal colostomy complications. *Chinese Nursing Research*, 2(1), 9-11.
- [69]. Yun, K., Yin, L., Yun, Z., Xiu-zhen, X. U. E., & Zhong-hua, Z. H. A. N. G. (2014). Design and Implementation of Weixin Service Platform for Library. *Library Tribune*, 2, 90-95.
- [70]. Zhang, B., Wu, M., Kang, H., Go, E., & Sundar, S. S. (2014). Effects of security warnings and instant gratification cues on attitudes toward mobile websites. *SIGCHI Conference on Human Factors in Computing Systems* (pp. 111-114). ACM
- [71]. Zhang, Y., & Rau, P. L. P. (2015). Field Study on College Students' Uses and Gratifications of Multitasking Interaction with Multiple Smart Devices. In *Cross-Cultural Design Applications in Mobile Interaction, Education, Health, Transport and Cultural Heritage* (pp. 407-416). Springer International Publishing.

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