

SMART

Journal of Business Management Studies

(A Professional, Refereed, International and Indexed Journal)

A SERIAL OF SCIENTIFIC MANAGEMENT AND ADVANCED RESEARCH TRUST

Vol-11 Number- 1

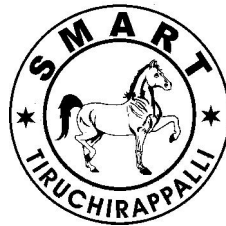
January - June 2015

Rs.400

ISSN 0973-1598 (Print)

ISSN 2321-2012 (Online)

Professor MURUGESAN SELVAM, M.Com, MBA, Ph.D
Founder - Publisher and Chief Editor



SCIENTIFIC MANAGEMENT AND ADVANCED RESEARCH TRUST
(SMART)

TIRUCHIRAPPALLI (INDIA)

www.smartjournalbms.org

COMPULSIVE USE OF SMARTPHONE AND ITS EFFECT ON ENGAGED LEARNING AND NOMOPHOBIA

Jena R K

Institute of Management Technology, Nagpur, India

E-mail : rkjena@gmail.com

Abstract

The usage of Smartphone has been a 21st century phenomenon that attracts young generation for their usefulness and different functions. To fulfill these needs, this paper has two objectives. This study looks into the pattern of Smartphone usage among post graduate students of Management in India. Secondly, it examines the effect of compulsive Smartphone usage on engaged learning and perceived effect and implications of Smartphone on nomophobia among students. The result shows that the compulsive use of Smartphone has a significant effect on nomophobia whereas the study failed to establish any significant relationship between compulsive use and engaged learning.

Keywords: *Smartphone, Nomophobia, Engaged Learning, Academic Performance*

JEL Code: *C12, I23, M15, Q33*

1. Introduction

It is an undeniable fact that technology has become an integral part of everybody's life in today's society. Technological revolution in academic organization has not only improved efficiency but also helped to reduce the problem of boredom in workplace (**Vieitez, Carcia, & Rodriquez, 2001**). The advancement of technology has also been a dominant force in affecting students, academic life (**Roberts, J., & Pirog, S., 2013**). Smartphone is a major information technology device and students feel the urge to adapt to it in order to "keep up with the times". Smartphone is a mobile phone with characteristics similar to the ones of a computer. Student can check e-mail, browse the internet and add personal functionality by downloading applications by using the Smartphone. A

Smartphone can be defined as "...a handheld computer integrated into a mobile phone" (**Encyclopædia Britannica, 2012**). Smart products are leading this Era and functioning as the new buzzword. The market share of Smartphone is increasing day by day. According to a survey by market research firm, Nielsen (**Nielsen Survey, 2012**), majority (50.4 per cent) of U.S. mobile subscribers owned Smartphones. The survey has also covered the usage pattern of Smartphone. According to this study, 22 million people use their Smartphones for social networking, 24 million use it for online searching, 21 million for looking up app-stores and 19 million use these devices for chatting and mailing. Around 16 million users view streaming videos; another 16 million use Smartphones for maps and navigation while 8

million use it for banking & finance, travel, shopping and accessing web portals. The survey also highlights that Smartphone ownership peaks in the age bracket of 18-24 year. Education level also plays a significant role and a significant number of graduates/post-graduates own Smartphones (**Nielsen, 2012**). India is no exception in terms of Smartphone usages. According to the Nielsen (**Nielsen Survey, 2012**), the Smartphone market is growing at the rate of 100 per cent since 2010. According to Nielsen study, on an average, Indian Smartphone users spend 2 hours and 30 minutes with Smartphones and 72 per cent of that time goes into gaming, entertainment, and internet. Traditional voice calls and text messaging take a mere 28 per cent of the time. It has been observed that younger Indians (**15-24years**) prefer to spend most of their time in browsing the internet, with less time spent for SMS. Casual browsing of the phone like searching for contacts and setting alarms take only 30mins of young Indians per day. According to a survey conducted by TCS in 2013, 70 per cent of students own Smartphones.

The frequent use of Smartphone may lead to compulsive usage and enhance students stress and affect student learning. Frequent use of Smartphone also creates a psychological problem known as “Nomophobia”. Nomophobia is the fear of being without a mobile phone. The term is an abbreviation for “no-mobile-phone phobia” and it was first coined in 2012. Due to this problem, a person gets irritated or anxious, if he is in an area of no communication network, has run out of balance or even worse, run out of battery, which adversely affects the concentration level of the person. Another important effect of excess use of Smartphone is on the engaged learning of students. Engaged Learning is defined as a positive energy invested

in one’s own learning, evidenced by meaningful processing, attention to what is happening in the moment and involvement in specific learning activities. The objective of this research is to study the impact of compulsive behavior on nomophobia and engaged learning due to the use of Smartphone among PG students. The study also shows that Smartphone helps students to create environment and support to unleash their creativity and innovation.

2. Literature Review

Smartphone usage among students is growing exponentially (**Woodcock et al., 2012**). Now a days, students prefer smart phones while purchasing new phones. The use of Smartphone has brought about many changes in student academic activities. Due to the increased use of personalized content, students can easily obtain their information that they need in real time. Smartphone could use real time media such as Facebook, Twitter and help create online communities among students. Students in future can exert more power in a way that they could not have imagined before using Smartphone (**F. Cairncross , 1997**). However, the evolution of these technologies can lead to increased stress and nomophobia.

This area of interest was chosen because unregulated usage and over dependent attitude on these devices by youth, particularly students, lead to nomophobia and other social issues. Interestingly, **Geser, (2006) and Junco R, Timm D. (2008)** had observed that the youth (students) have consistently displayed higher level of attachment to their cell phones which could serve as distractions to their study. The attitude and time spent towards these devices is increasing day by day. It also makes them addicts. A study by Naval and his colleagues (**Naval et al., 2004**), in the University of Navarra, affirms that young people between 15

and 19 admit being addicted to their cell phones. The researchers also noted that more and more people are getting addicted to their cell phones, causing stress and irritability. Specialists indicate that the abuse of the use of cell phones could be typified as ‘a disorder of addiction and the cause of nomophobia (Paniagua, 2005). At present, there are very few studies conducted to measure the nomophobia and their impact on students. Sanjay Dixit and his colleagues (Sanjay Dixit, Harish Shukla, AK Bhagwat, Arpita Bindal, Abhilasha Goyal, Alia K Zaidi, and Akansha Shrivastava, 2010) found significant number of students facing the problem of nomophobia. The researchers also found no statistically significant association between nomophobia and gender, place of stay and academic sessions. Market Analysis and Consumer Research Organization (MACRO) conducted a study in Mumbai to find patterns and association of mobile phone usage in their daily activities (Macro, 2004). The report pointed out that 58 per cent of the respondents could not manage without a mobile phone even for a day.

Based on the study of the past literature, the aim of the study was to understand the effects of compulsive use of Smartphone on engaged learning and nomophobia among post-graduate (MBA) students in India. Hence, the main objectives of the study were to:

1. Identify the penetration level of smart phones on the personal and academic life of students.
2. Examine the effect of compulsive behavior on students’ engaged learning.
3. Examine the nomophobia among students.

3. Conceptualization and Hypothesis Formulation

3.1 Need of the study

Information and Communication Technologies (ICT) have become an integral part

of all aspects of human life, including education. Now a days, student uses different high-end smart gadgets to use the power of ICT in their academic and social activities. The increasing capabilities of mobile or Smartphone are positioning them as the technology of choice, replacing PCs, for many students. As such, the use of these devices must be contemplated as an inevitable learning tool for higher education. The use of Smartphone creates some psychological and social tensions for students. But with the world moving rapidly into digital media and information, the role of Smartphone in education is becoming more and more important and this importance will continue to grow and develop in the 21st century. Hence the need of this study to assess the compulsive use of Smartphone in student’s social, personal and academic life. More precisely, the needs of this study were:

1. To enlighten the research community about the effect of compulsive use of Smartphone in personal and academic life of students.
2. To measure psychological traits (nomophobia, engaged learning) and their relationship with compulsive use of Smartphone.
3. The study can be beneficial in screening and helping potential compulsive Smartphone users (students).

3.2 Hypothesis Formulation

The objective of this research was to adopt the principle of personality theories, to explain compulsive behavior and its effect on nomophobia and engaged learning. Compulsive behavior is defined as “a response to an uncontrollable drive or desire to obtain, use, or experience a feeling, substance, or activity that leads the individual to repetitively engage in behavior” (O’Guinn and Faber, 1989). Its major feature includes compulsive eating,

shopping, gambling, and substance misuse and it is a pattern of repetitive, senseless behavior (Parylak, Koob, & Zorrilla, 2011). Extreme compulsive behavior is an obsessive-compulsive disorder which induces distress.

Compulsive use of Smartphone creates stress on students and it has a deep impact on engaged learning. Engaged learning has physical and psychological components (Bean, 2005). Psychological component of engaged learning is largely influenced by stress. Examining the psychological aspects of engagement due to frequent use of Smartphone was also one of the objectives of this research. The proposed model for the compulsive use of Smartphone and their possible effect is shown in **Figure-1**.

Based on the proposed model, this study formulated the following hypotheses, based on the objectives of the study, to ascertain the possible effect of compulsive use of Smartphone on PG management students.

H1: *Higher compulsive usage of Smartphone leads to higher Nomophobia*

H2: *Higher compulsive usage of Smartphone leads to reduced engaged learning*

4. Methodology

This study used both theoretical and empirical data, to examine the issue of Smartphone use in personal and professional life of post-graduate students (MBA) in India.

4.1 Measuring Instrument

Apart from the demographic and simple Smartphone usage questions, the main constructs were adopted from various pieces of literature and measured by multiple items. Compulsive usage of Smartphone was measured by using the instrument developed by **Yu-Kang Lee, Chun-Tuan Chang, You Lin, Zhao-Hong Cheng (2013)**. Nomophobia was

measured by the instrument developed by **Kamal K. Hingorani** and his **colleagues (Kamal K. Hingorani, Donald Woodard, Nasrin Askari-Danesh, 2012)**. The psychological aspect of engaged learning was measured by the method used by **Kuh G.D., Kinzie, J., Schuh, J.H., Whitt, E.J., & Associates., 2005**. Prior to conducting the actual data collection, a pilot test, involving nearly fifty respondents from IMT Nagpur, was conducted. The result of the reliability analysis was relatively high, with most items scores (Alpha Cronbach) being above 0.75. The likert-type scale was used to address the level of importance of the Smartphone to the different student activities and their psychological and social effect.

4.2 Sample Selection

Primary data were collected, during last quarter of 2013, from the students of Master of Business Administration (MBA), from different parts of Central India. Survey questionnaire was triangulated for the purpose of primary data collection. A set of 450 semi-structured questionnaires was administered, with a purposive sampling technique, for primary data collection by using social media and email to the students who possessed Smartphone. 310 questionnaires were collected, with a response rate of more than 65 per cent. A mixture of respondents, with regard to their sex, engineers, non-engineers and work experience, was adopted for uniform representation of sample. **Table-1** represents the demographic information about the participants. It shows that majority (68 per cent) of respondents were males compared to females (32 per cent). The sample contained 63 per cent of engineers compared to 37 per cent of non-engineers. The non-engineers were those who did not have enough exposure to information and communication technology.

The data, collected through the administered questionnaires, were analyzed with the help of PASW Statistic 18 software. Descriptive statistics and inferential statistics were used to analyze the data for this study.

5. Findings

5.1 Descriptive Statistics

In an attempt to discuss the issue of smartphone and its usage, personal observation was organized. Students, using the phones, visited social platform such as the Facebook, Twitter, 2go, Myspace etc during academic periods and off academic periods. This indicated that the internet phones had a strong effect on the students. From the collected data, it was found that more than 60 per cent of students possessed more than one phone. 85 per cent of students were using internet enabled phones. 97 per cent of them actively used internet mobile services to enable them to surf and browse the net. **Figure-2** shows the time spent by the respondents every day with Smartphone.

Figure-2 shows that majority of students browsed a minimum of five hours daily while some browsed and chatted at every single available opportunity. The data also indicated that they browsed more on social site than on academic purpose. The reason cited for browsing the social site was that it helped them to cool off during their stay in the institution. In other words, it was boring for them without connecting to their friends and loved ones. The responses to the question relating to the use of mobile phone, are presented in **Figure-3**. The pie chart shown in the Figure, signifies that majority of respondents indicated that they browsed for academic information and chatting came second, followed by networking and blogging. In short, the students browsed more with their phone on academic information. The use of social network was one of the important

activities among the young generation. The responses to the question relating to the preference of social sites using Smartphone, are shown in **Figure-4**. Facebook, Twitter, Instant messengers etc were listed as their learning instrument. The number of Facebook users was 203, Twitter respondents were 51 and Instant Messengers such as 2go, Yahoo messengers, etc. were 56.

The study also found that the decision on choosing a Smartphone rested on the Smartphone's functions, followed by the usability. Other factors included budget, other's influence, following trend and fashion statement etc. This finding contradicted the earlier findings of **Katz, and Sugiyama (Katz, and Sugiyama, 2006)** where they found that students were more interested in the Smartphone's function rather than fashion statement. Few students also revealed that they had no choice with the decision on choosing the Smartphone as some of them received their Smartphone as gift from others. Some others chose their Smartphone, based on others influence, fun, design, inexpensive, and also because it had longer battery life.

It also found that more than half (61 per cent) of the respondents were responsible for their own phone bills. The reason may be that post-graduate students were already considered adults and many of them received study loans, scholarship, or allowances from sponsors and family members. It also revealed that many of them subscribed to prepaid plan (89.2 per cent) as they could manage their monthly phone bill according to their budget. The most popular non academic activities preferred by the students were to send and receive text messages (98.9 per cent), take pictures (81.1 per cent), play music (84.1 per cent), setting the alarm (96 per cent), referring to the calendar (69.5 per cent), recording videos (96.8 per cent)

and play games (96.9%). It was also found from this research that most of the respondents used their Smartphone for sending and receiving text messages. This result confirms the findings of previous researches (Thulin, & Vilhelmson, 2007; Lenhart, Ling, Campbell, & Purcell, 2010; Noor Mayudia Mohd Mothar et al, 2013).

5.2 Inferential Statistics

A two-step approach was employed to test the proposed hypotheses. First, the quality of the measurement model was assessed and then the structural model was used to test the hypotheses. This model was estimated by using AMOS software. Scale was tested by using the Confirmatory Factor Analysis (CFA) on the collected data and found all the factors' loading were more than 0.6 and this confirmed internal consistency of the instruments. In addition, the convergent validity of the measures was supported since the factor loadings of the indicators were all significant ($p < .05$) and greater than 0.50 (Anderson & Gerbing, 1988). The proposed model, shown in Figure-1, was tested for model fit. The model fit parameters are found in Table-2. But the recommended values for chi-square/degrees of freedom should exceed '1' and should be less than '5' (Salisbury, W.D. et al, 2002). According to Hair (Hair, J.F. et al 1998), GFI > 0.85 and AGFI > 0.8 represented an acceptable fit. Recommended values for NFI and TLI were > 0.90 , and for CFI > 0.90 (Salisbury, W.D. et al, 2002). RMSEA values being less than 0.1, signified a good fit (Hu, L.T., 1995; Salisbury, W.D. et al, 2002). Thus the values, found for different model indices, satisfied the acceptable levels. This implies that the values obtained from Table-2 fell within the recommended boundary and there

were no significant correlations between the error terms. Therefore, it confirmed the convergent and discriminate validity among the factors and the proposed model was fit for the collected data.

5.2.1 Hypothesis Testing

Structural Equation Modeling (SEM) was employed to evaluate the structural model. Table-3 summarizes the results of standardized structural path estimates. The result shows that a significant positive relationship existed between compulsive usage of Smartphone and nomophobia ($p=0.1 < 0.5$, $t=5.67$). Hence hypothesis (H1) is accepted. That means, higher compulsive use of Smartphone increased the nomophobia. This research result is well supported by the research result of Complete (Complete, 2012). He found positive relation between mobile phone usage and nomophobia. He also found that females were suffering more than males. Table-3 also indicates that there was no significant relationship between compulsive use of smart phone and the engaged learning of students ($p=0.23 > 0.05$, $t=-2.45$). Hence hypothesis (H2) is rejected. However, there may be cases of such affecting students' learning. But our instrument failed to establish the relationship between compulsive use of Smartphone and engaged learning. The reason may be that the research failed to incorporate many uncontrolled variables that collectively may impact the engaged learning of students. Examples of such impacts could be the commitment of students, their personal circumstances and their attendance during class hours other than the use of Smartphone. Also the study addressed the perception of students, during data gathering on the field, towards the usage of their Smartphones. These perceptions are indicated in the results of this study.

6. Suggestion, Limitation and Future Scope

Although, the study revealed the negative impact of Smartphone on student's life, careful and need-based use of Smartphone can reduce the negative impact and improve learning. Therefore, this study recommends proper guidance and motivation training to leverage the educational potential of mobile devices. Faculties should encourage students to use their mobile devices to subscribe to news programs and podcasts of personal interest and then give them an opportunity to share particularly relevant topics in class. Organization should identify best practices of Smartphone usage in academics and share them with the campus community in the form of lesson plans, video clips, or demonstrations.

There are few limitations of this study. First, this study depended exclusively on participants' self-reports and hence the results may thus have been vulnerable to the effects of common-method variance. Second, this study was cross-sectional and co-relational in nature and the current research alone could not provide sufficient evidence of the stated causal relationships among compulsive use of Smartphone, nomophobia and engaged learning.

The current study has a number of opportunities for future research. First, to overcome the disadvantages of self reported data regarding compulsive usage of Smartphone, future research may consider a tracking study by a longitudinal logging of Smartphone with custom tracking software. Second, several other dimensions e.g. student academic performance, motivation and use of the phone for instrumental/ expressive purposes can be considered in future research. Third, this study was limited to central India and a Pan India representation can be considered for future research to find more generalized results.

7. Conclusion

The first part of this study verified the most frequent usage, usual usages and serviceability of Smartphone. The study showed that majority of students used their Smartphone for chatting and social networking. It revealed also that it was possible for students to enhance and broaden their academic learning by browsing for academic materials and equip themselves better towards their examination preparation. The second part of the study found no significant relation between compulsive Smartphone usage and engaged learning of students. But the results show a positive significant relationship between compulsive Smartphone usage and nomophobia. Although causal relationships have not been firmly established in this study, it provides important insights into possible pathways through which psychological traits might facilitate the development of compulsive usage of smartphone and generate different types of stress and habits. The results will help students and researchers to better understand Smartphone usage among students. Finally, in my opinion, the findings of this study are not sufficient to solve the lacuna of students' academic learning and its relationship with compulsive use of Smartphone but will go a long way to help students to be better equipped if appropriate time is meted out to harnessing its potentials in a positive note.

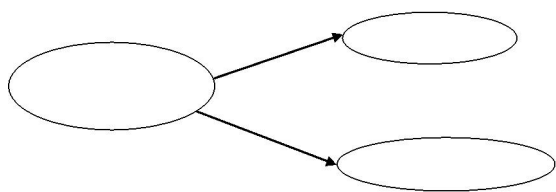
8. References:

- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach, *Psychological Bulletin*, 103 (3), 411–423.
- Bean, J. P. (2005). A conceptual model of college student engagement. Paper presented at the annual meeting of the Association for the Study of Higher Education, Philadelphia, PA

- Compete (2012). The Male vs, Female Debate Goes Mobile, <http://blog.compete.com/2011/11/29/the-male-vs-female-debate-goes-mobile/> Accessed on Oct, 2013
- Emeka Ezemenaka (2013). The usage and impact of Internet enabled phones on academic concentration among students of tertiary institutions: A study at the University of Ibadan, Nigeria, *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, 9(3),162-173
- Encyclopædia Britannica (2012) <http://www.britannica.com/>
- F. Cairncross (1997). *The Death of Distance: How the Communications Revolution Will Change Our Lives*, Boston, MA: Harvard Business School Press
- Geser Hans (2006) "From printed to "wikified" encyclopaedias. Sociological Aspects of an Incipient cultural revolution", *Sociology in Switzerland*. Online Publications, Zürich, http://socio.ch/intcom/t_hgeser16.pdf
- Hair, J.F.; Anderson, R.E.; Tatham, R.L.; and Black, W.(1998). *Multivariate Data Analysis with Readings*. Upper Saddle River, NJ, Prentice Hall.
- Junco, R., & Timm, D. (2008). *Using emerging technologies to enhance student engagement. New directions for student services. Issue #124*. San Francisco, CA: Jossey-Bass
- Hu, L.T., and Bentler, P.M. Evaluating model fit. In R.H. Hoyle (ed.) (1995). *Structural Equation Modeling: Concepts, Issues, and Applications*. Thousand Oaks, CA: Sage.
- Kamal K. Hingorani, Donald Woodard, Nasrin Askari-Danesh (2012). Exploring how smartphones supports students' lives, *Issues in Information Systems*, 13(2), 33-40.
- Katz, James E. & Sugiyama, Satomi. (2006). Mobile phones as fashion statements: Evidence from student surveys in the US and Japan. *New Media & Society*, 8(2), 321-337.
- Kuh G D, Kinzie, J., Schuh, J.H., Whitt, E.J., & Associates. (2005). *Student success in college: Creating conditions that matter*. San Francisco: Jossey-Bass.
- Lenhart, A., Ling, R., Campbell, S., & Purcell, K. (2010). Teens and mobile phones: Text messaging explodes as teens embrace it as the centerpiece of their communication strategies with friends. Pew Research Center. Retrieved from <http://www.pewinternet.org/~media/Files/Reports/2010/PIP-Teens-and-Mobile-2010-with-topline.pdf>
- Macro (2004). A report on study of mobile phone usage among the teenagers and youth in Mumbai, April-May-2004. Available from: <http://www.itu.int/osg/spu/ni/futuremobile/socialaspects/India MacroMobileYouth Study04.pdf> (last accessed on September, 2013)
- Naval C, Ch. Sádaba Y J Brigué. (2004). Impacto de las TIC (Tecnologías de la Información Comunicación) en las relaciones sociales de los jóvenes navarros, Universidad de Navarra
- Nielsen (2012). There are 27 million smartphone users in urban India: Nielsen survey, retrieve on October, 2013 from <http://techcircle.vccircle.com/2012/06/22/smartphone-usage-surging-in-urban-india>
- Nielsen Survey(2012) Available: <http://blog.nielsen.com/nielsenwire/?p=31688>, retrieve on Dec, 2014.
- Noor Mayudia Mohd Mothar, Musa B. Abu Hassan, Md Salleh B. Haji Hassan, Mohd Nizam Osman (2013). The Importance of Smartphone's Usage Among Malaysian Undergraduates, *IOSR Journal Of Humanities And Social Science (IOSR-JHSS)*, 14(3), 112-118.

- O' Guinn, T. C., & Faber, R. J. (1989). Compulsive buying: A phenomenological exploration, *Journal of Consumer Research*, 16(2),147–157.
- Paniagua A., (2005).El 38% de los niños sienten ansiedad si no llevan sumóvil,. El Norte de Castilla” Colpisa
- Parylak, S. L., Koob, G. F., & Zorrilla, E. P. (2011). The dark side of food addiction. *Physiology & Behavior*, 104(1), 149–156
- Roberts, J., & Pirog, S. (2013). A preliminary investigation of materialism and impulsiveness as predictors of technological addictions among young adults,*Journal of Behavioral Addictions*, 2(1), 56–62.
- Sang-Zo Nam (2013). Evaluation of University Students’ Utilization of Smartphone, *International Journal of Smart Home*, 7(4),162-173.
- Sanjay Dixit, Harish Shukla, AK Bhagwat, Arpita Bindal, Abhilasha Goyal, Alia K Zaidi, and Akansha Shrivastava (2010). Study to Evaluate Mobile Phone Dependence Among Students of a Medical College and Associated Hospital of Central India, *Indian J Community Med*. 35(2), 339–341
- Salisbury, W.D., Chin, W.W.; Gopal, A. and Newsted, P.R (2002). Research report: Better theory through measurement—Developing a scale to capture consensus on appropriation. *Information Systems Research*, 13(1), 91–103.
- Thulin, E., & Vilhelmson, B. (2007). Mobiles Everywhere Youth, The Mobile Phone, And Changes In Everyday Practice, *Young Nordic Journal of Youth Research*, 15 (3), 235–253.
- Vieitez, J. C., Carcia, A. D. L. T., & Rodriguez, M. T. V. (2001). Perception of job security in a process of technological change: Its influence on psychological well-being, *Behaviour & Information Technology*, 20(3), 213-223.
- Woodcock, Ben, Andrew Middleton and Anne Nortcliffe (2012). Considering the Smartphone Learner: An Investigation into Student Interest in the Use of Personal Technology to Enhance their Learning, *Student Engagement and Experience Journal*, 1, 1-15.
- Yu-Kang Lee, Chun-Tuan Chang , You Lin, Zhao-Hong Cheng (2014). The dark side of smartphone usage: Psychological traits, compulsive behavior and technostress, *Computers in Human Behavior*, 31, 373–383.

Figure-1: Conceptual model



Source: Primary Data

Figure-2: The browsing frequency of respondent

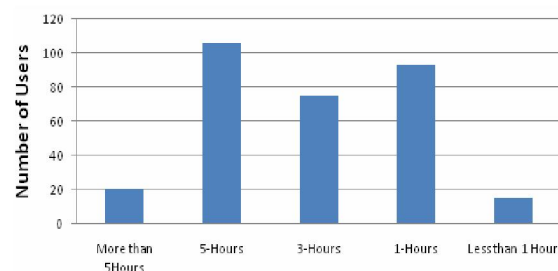


Figure -3: Smart phone usage

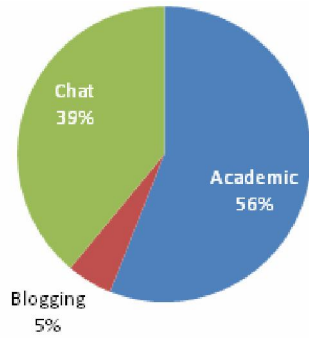
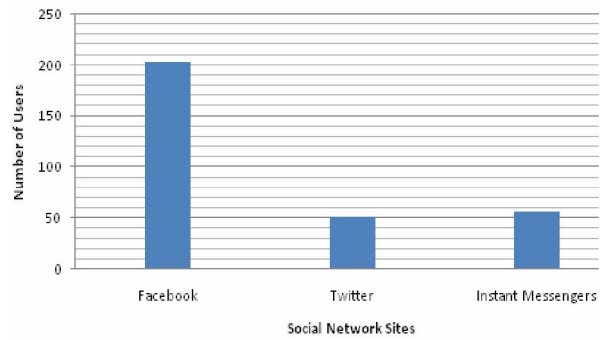


Figure-4: Social Site Preferences



Source: Primary Data

Table-1: Demographic Information

| | | |
|--------------------|--------------|-----|
| Gender | Male | 212 |
| | Female | 98 |
| Technical Exposure | Engineer | 196 |
| | Non-Engineer | 114 |

Source: Primary Data

Table-2: Result of Goodness of Fit

| Model Indices | Values |
|---|--------|
| Chi-square/degrees of freedom | 1.35 |
| Goodness-of-fit index (GFI) | 0.92 |
| Adjusted goodness-of-fit index (AGFI) | 0.87 |
| Normed fit index (NFI) | 0.91 |
| Tucker–Lewis index (TLI) | 0.95 |
| Comparative fit index (CFI) | 0.94 |
| Root mean square error of approximation (RMSEA) | 0.07 |

Source: Primary Data

Table-3: Hypothesis Result

| Path | B | t-Values | P | Result |
|-------------------------------------|-------|----------|------|----------|
| Compulsive usage ? Nomophobia | 0.71* | 5.67 | 0.01 | Accepted |
| Compulsive usage ? Engaged Learning | 0.41* | -2.45 | 0.23 | Reject |

Source: Primary Data