

# Use of Internet through Mobile Devices: A Survey

Somipam R. Shimray<sup>1\*</sup> and Chennupati K. Ramaiah<sup>2</sup>

<sup>1</sup>Department of Library and Information Science, Pondicherry University, Kalapet – 605014, Puducherry, India; somipamrshimray486@gmail.com

<sup>2</sup>School of Media & Communication, Department of Library and Information Science, Pondicherry University, Kalapet – 605014, Puducherry, India; ckramaiah.lis@pondiuni.edu.in

## Abstract

The purpose of this paper is to examine the use of Internet through mobile devices. This study was conducted using a questionnaire. Findings reveal that most of the respondents admit the importance of the Internet in their day-to-day life. Over three fourths (79%) of them have access to the Internet on their mobiles and majority (84.8%) preferred accessing Internet at home.

**Keywords:** Internet, Library Use, Mobile Phones

## 1. Introduction

The world is moving towards increased adoption of mobile technology. The mobile phone has tremendously improved the connectivity, reorganized and modified our style of living (Ravichandran, 2009). Mobile technology has influenced our social relations, education system, business processes and countless other facets of life (Ling, 2004). Of the many technologies introduced during the last couple of decades, mobile phone has replaced many other modes of communication and has even turned out to be an addiction among all age groups. Since it is an all affordable technology, it is extensively used across the world by rich and poor alike. According to UNESCO statistics, billions of mobiles are being used by all categories of people including illiterates. UNESCO is developing mobile tools to eradicate illiteracy in the world. Over the years there has been a tremendous increase in the use of Internet on mobile phone. Developed countries are already using more and more Internet and mobile phones and now developing countries are also experiencing increased use of mobile phones to access Internet (Poushter, 2016a).

## 2. Literature Review

### 2.1 Use of Mobile Phones

Srivastava (2005) in a study found that mobile phone has become an essential tool to all so, people cannot leave

home without carrying a mobile phone (Srivastava 2005). Poushter (2016a) found that smart phone possession rates have risen steeply in many countries (Poushter, 2016b). Poushter (2016a) reported that South Korea ranks the highest in smartphone possession by 88% of people, whereas Ethiopia has the least percentage (4%) smartphones ownership (Poushter, 2016b). Gender is one of the prime socio-demographic factors affecting use of mobile phones: Boys mostly used mobile phones for gaming (Cotton *et al.*, 2009) whereas girls used for chatting and watching movies (Castells, 2007). By 2020, 90% of the world's populations of over six years old, i.e. 6.1 billion people are expected to own and use mobile phones (Ericsson, 2014). Shimray, Keerti and Ramaiah (2015) found that the dropping cost of handsets, combined with enhanced usability and increasing network coverage features are making mobile technology widely acceptable (Shimray *et al.*, 2015).

### 2.2 Internet Usage

The Internet is widely used for browsing and finding the required information (West & Mace, 2010) as well as for social networking (Haddon, & Kim, 2007). Age, gender, education qualification, income and ethnicity are vital parameters in determining the variations in the effective use of the Internet (Hargittai, & Kim, 2010). According to Pew Research Center, 45% across 21

\*Author for correspondence

emerging and developing nations informed using the Internet occasionally (Madden *et al.*, 2013). By 2015, the figures increased to 54% in Malaysia, Brazil and China (Poushter, 2016b). A survey conducted during 2015 in developing countries on the use of Internet found that about three-quarters of adult Internet users across 40 countries use the Internet at least once a day (Poushter, 2016b). Internet users in developing nations are expected to grow but Internet usage depends on the wealth of a country. Mobile online communication provides two ways to access content: browsing the mobile web using the web browser versus using specific mobile apps. App use is quite common among people and more so among youth. Other studies on mobile Internet use also confirm the importance of browsing for information (West, & Mace, 2010) as well as social networking (Haddon, & Kim, 2007).

A comparative study of a personal computer and mobile-based Internet users (Pearce, & Rice, 2013) found disparity with respect to their Internet access and online activities. Using the Internet via mobile phones is more popular particularly with lower income group (Helsper, 2012). Prensky (2001) noticed that the younger generations do not face digital exclusion as they are growing in an oblique media environment (Prensky, 2001). Several researchers pointed out that disparities in access, usage, expertise and inspiration to use Internet continues. Hasebrink, Görzig, Haddon, Kalmus, & Livingstone (2011) stated that age, gender and income are interrelated with where and how young people access the Internet (Hasebrink *et al.*, 2011). A recent report by the Pew Research Center (Madden, Lenhart, Duggan, Cortesi, & Gasser, 2013) indicated that using Internet via mobile phone has turned out to be more prevalent amongst young Americans aged between 12-17 years (Madden *et al.*, 2013).

### 3. Purpose of the Study

The scope of this study is to examine and understand Internet use through mobiles. The study has been conducted in Hyderabad city.

The study has the following objectives:

- 1) To identify the level of mobile use;
- 2) To find out the use of mobile phone for various purposes; and
- 3) To find out the use of the Internet through mobiles

## 4. Methodology

To accomplish the above objectives, a structured questionnaire was designed and circulated to 300 people with different subject backgrounds such as Science, Medicine, Information technology, Engineering, Social Science and Library Science. A total of 276 (92%) filled-in questionnaires were received and the same were used for data analysis with the help of SPSS software.

### 4.1 Population, Sample and Data Collection

The sample for this study is drawn from Hyderabad city having population of nearly 7 million with a literacy rate of 83.26%. The demographic profile of the sample is shown in table 1. Of the total, 52.9% respondents are males and the remaining (47.1%) are females. More than one-third of the respondents (40.9%) are in the 23-25 years age group, over a third (36.3%) in the 20-22 years, 11.2% belong to 26-28 years, 6.5% belong to 29-31 years, and 5.1% belonged to 32 years and above. With regards to their occupation, two thirds (67%) of the respondents were students and the remaining 33% were employed in various sectors. Three fourths (74.6%) of the respondents live in urban and one-fourth (25.4%) of them came from rural areas but they are living in Hyderabad city. With regard to their annual income, one third (34.8%) of them earn up to 3 Lakhs, close to a third (32.6%) of them earn less than 1 Lakh, 13.4% of them earn up to 2 lakhs, 11.6% of them earn 4 Lakhs, and 7.6% of them earn 5 lakhs. The respondents who earned 3 lakhs and above were working professionals.

**Table 1.** Personal data of respondents

Measure	Item	Number	(%)
Gender	Male	146	52.9%
	Female	130	47.1%
Age Group (years)	20-22	100	36.2%
	23-25	113	40.9%
	26-28	31	11.2%
	29-31	18	6.5%
	Above 32	14	5.1%

Occupation	Students	185	67.0%
	Employee	91	33.0%
Highest Educational Qualification	Integrated M.A/M.Sc.	15	5.4%
	Graduate	179	64.9%
	Postgraduate	56	20.3%
	Ph.D.	26	.9.4%
Subject Background	Science	43	15.6%
	Medicine	45	16.3%
	Information technology	40	14.5%
	Engineering	54	19.6%
	Social Science	55	19.9%
	Library Science	39	14.1%
Area of Living	Urban	206	74.6%
	Rural	70	25.4%
Annual Income	Less than 1 lakh	90	32.6%
	2 Lakhs	37	13.4%
	3 Lakhs	96	34.8%
	4 Lakhs	32	11.6%
	Above 5 Lakhs	21	7.6%

## 5. Results and Discussion

The data collected from the respondents were analyzed keeping the objectives in mind.

### 5.1 Mobile Phone Usage

All the respondents (100%) owned and are using a mobile phone but their brands and models are different. A study conducted by Vaidya *et al.* (2016) found that 28.5% of the respondents used a Samsung mobile phone. They also found that Samsung phones are more popular being affordable and providing all desirable features.

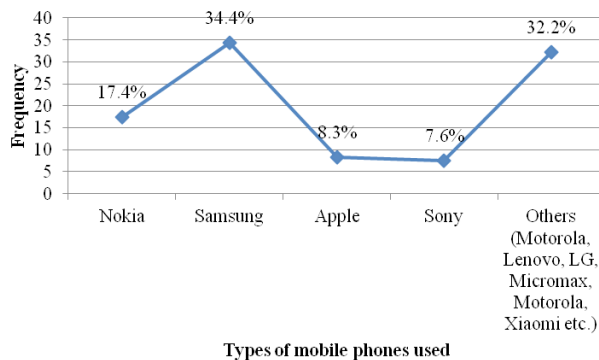


Figure 1. Types of mobile phones used.

Over 60% of the respondents had been using mobile phones for 3 or more years. More than a third of the respondents used Airtel as their service provider.

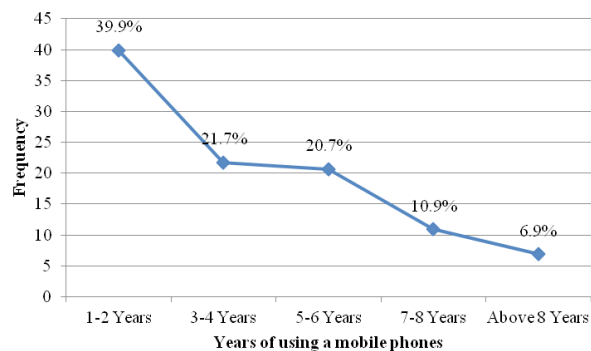


Figure 2. Years of using mobile phones.

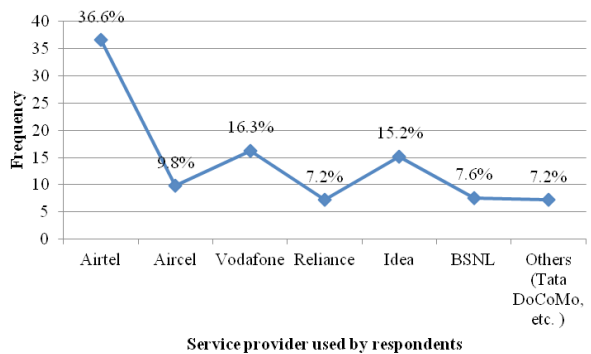


Figure 3. Service provider used by respondents.

#### 5.1.1 Purpose of using Mobile Phones

It was found that less than a third (30.2%) of the respondents used mobile phones for social networking, followed by surfing Internet (21.7%), taking photos and

making phone calls (12.4%), sending text messages and mobile reading (6.2%), downloading music and videos (4.7%), writing and checking email (3.9%), and playing games (2.3%) (Figure 5). Nowadays all smart phones come with inbuilt Social Networking Sites (SNS) and by using play store users can download SNS Apps, that's how most of the people are socially connected. It is the most economical way of networking and communicating with people; so, many people use mobiles for this purpose.

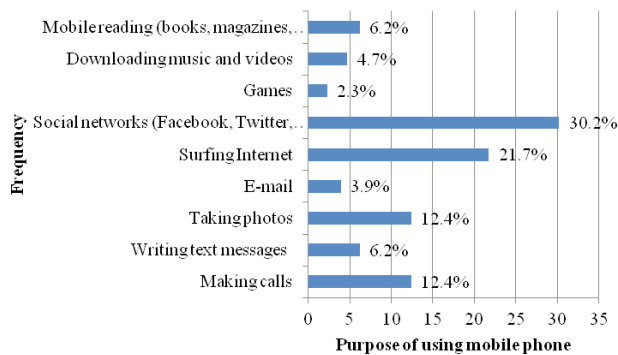


Figure 4. Purpose of using mobile phone

Table 2. Respondent's opinion on mobile phone

Opinion	SD**	D**	N**	A**	SA**	Mean	SD
1 Today the mobile phone has become a basic necessity.	7 (2.5)	8 (2.9)	23 (11.6)	49 (17.8)	180 (65.2)	4.4022	0.97675
2 The mobile model you use/buy indicates how fashionable you are.	33(12.0)	41 (14.9)	96 (34.8)	73 (26.4)	33 (12.0)	3.1159	1.16664
3 Mobile phones are commonly used for reading purpose.	28 (10.1)	60 (21.7)	117 (42.4)	54 (19.6)	17 (6.2)	2.8986	1.02896

\*\*SA = strongly agree, A = Agree, N = Neutral, D = Disagree, SD = Strongly disagree

The responses indicate that most people feel that mobile phone has become a basic requirement for everyone.

## 5.2 Use of the Internet

This section covers the usage of the Internet, preferred place for browsing, the purpose of using Internet and ease of searching for materials on mobiles. Of the total, a majority (79%) have access to Internet on their mobiles. This indicated that the respondents are technology savvy. The majority (84.8%) of them preferred using the

### 5.1.2 Amount of Time Spent Daily on the Mobile Phones

Regarding the amount of time spent daily on a mobile phone (Figure 6), over one third (39.9%) spent 1-3 hours daily, one fifth (20.7%) spent less than an hour daily, close to one fifth (18.5%) of them used for 4-6 hours, 15.2% of them used for 7-9 hours, and 5.8% of them used for 9 hours above.

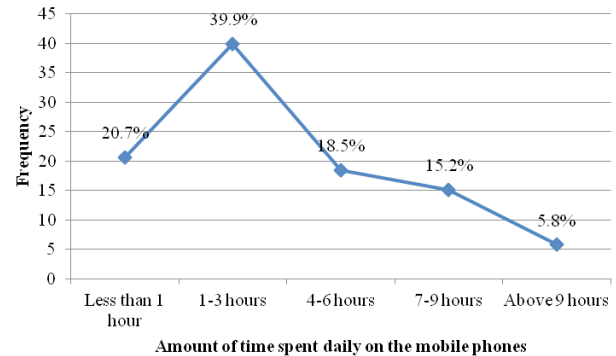


Figure 5. Amount of time spent daily on the mobile phones.

Internet at home and over one-tenth (11.6%) of them prefer browsing the Internet at workplaces and a small percentage (3.3%) of them preferred doing so while traveling so that their traveling time is utilized properly.

#### 5.2.1 Internet Usage in Hours

Close to half (46.4%) of them used the Internet daily for 1-2 hours and 31.2% of them used for 3-4 hours. The data clearly indicates that respondents are active Internet users so most of them (92.8%) use Internet for 1-6 hours daily (Figure 7).

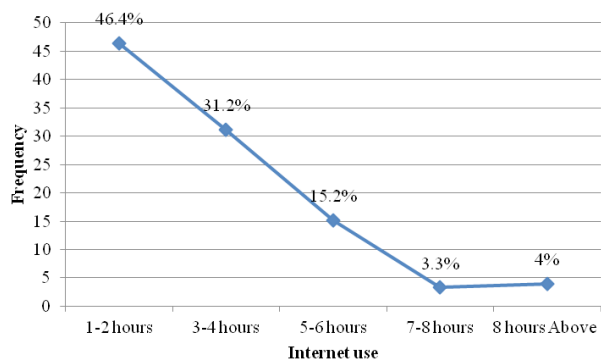


Figure 6. Internet Usage in Hours

### 5.2.2 Purpose(s) of using the Internet

The study also identified the purpose(s) of using the Internet (Figure 8). Of the total, close to one third (28.6%) used the Internet for reading, one fifth (24.6%) used Internet on their mobiles for social networking (Facebook, Twitter, WhatsApp, Instagram, etc.) regularly. Also found that one fifth (19.2%) used for downloading music and video files, 15.9% of them used for playing online games and 11.6% used for sending and receiving emails. These results show that respondents are using the Internet mainly for reading and social networking.

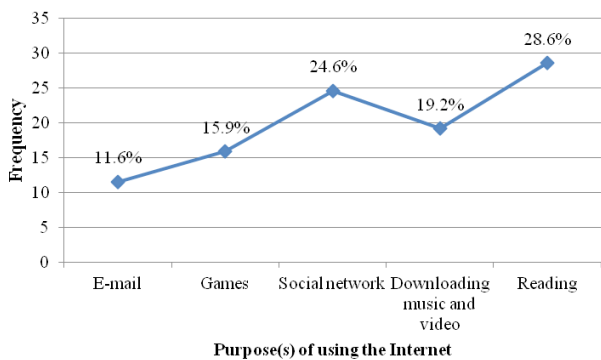


Figure 7. Purpose(s) of using the Internet

### 5.2.3 Ease of Searching for Documents on the Internet

Respondents were asked about the ease of searching documents on Internet and it is found that 100% are comfortable in searching documents on Internet. As represented in figure 9 of the total, 14.9% of them are comfortable searching for textbooks, 13.8% of them seek newspapers, 13.4% of them search for e-Journals, etc.1. A study conducted by Muniandy (2010) had found that 34.8% of the respondents often used mobile phone for

searching textbooks, 28.3% of them for finding latest information about their institution, and 75% of them for finding information from their university web pages, 40.2% of them to download notes, 30.4% for finding journals and 35.9% for social networking sites.

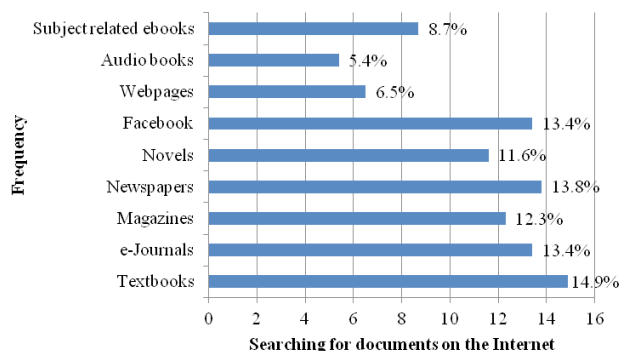


Figure 8. Comfortable in searching for documents on the Internet

### 5.3 Differences between Different User Groups

A nonparametric chi-square test to see if there is any significant difference between male and females, suggested, no significant difference except in respect of type of material read; Males inclined towards reading textbooks, journals, magazines and subject related books whereas females inclined towards reading novels.

Mobiles usage varies between students and employees. Students find more time at home, therefore, mostly used mobiles at home and college whereas employees used mobiles in office places or work places basically for business purposes. Most of the time students referred textbooks and subjected related books and employees read journals, magazines and newspapers. Most of the students like to read at home whereas employees preferred to read while travelling. This is because employees wanted to engage themselves while travelling. Students wished to read text with images, and multimedia content with hypertext links whereas employees chose to read long text files and avoid multimedia and hyperlinks distraction.

## 6. Conclusion

This paper examined level of mobile phones usage and the purpose(s) of using Internet in Hyderabad city. The results indicate that a significant proportion of mobile phone users use their mobiles for accessing Internet.

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