

An Analytical Study of Usage of Mobile Application among Generation X and Generation Y

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ABSTRACT:

The mobile phone is rapidly becoming the needed device -- the one device that seems to have it all and becomes even more indispensable than it is now. Mobile phones have already started to work more than just common communication devices. The purpose of this study is exploring the relationship between the use of mobile apps among Generation X and Generation Y. It was hypothesized that Generation Y is more convenient to use the smart phone to do online transactions as compare to Generation X.

The data was collected from 108 respondents through online questionnaire method and sample was selected through snowball sampling technique. This result will contribute to various industry to understand the usage of smart phone for online activities and the factors influencing online transactions.

Key Words: *Mobile Application, Booking Apps, Generation X, Generation Y, Mobile Phones*

INTRODUCTION

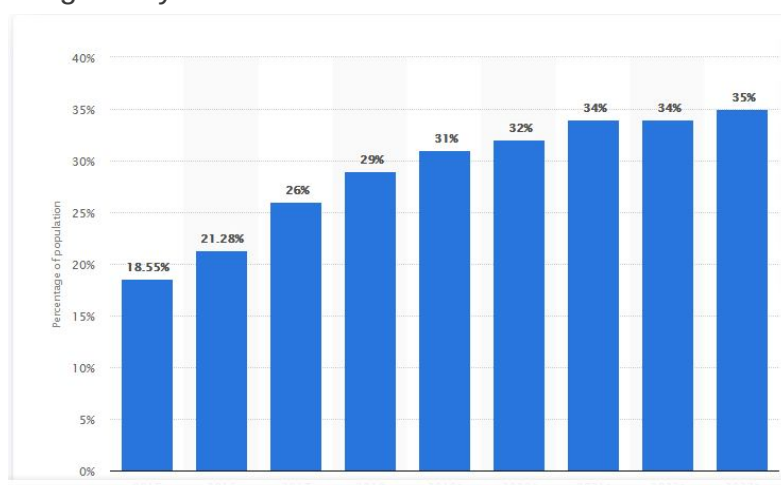
Presently Mobile phones are more in our everyday lives than earlier days and become an important part in modern travel and tourism sector. The smart mobile devices help to collect the information and understand it, to navigate in any area, to stay in touch with social networks, to find amusement and entertainment and many more. So in concise, present technology helps individuals to stay connected, up-to-date and completely ready

for travelling (Tussyadiah, 2015). The progress of mobile applications has been on the upswing for more than a decade, ever since the first arrival of the very first app store in July 2008 (Apple, 2008). At present India is among top countries in the world in number of apps installed and used per month, and has gone beyond the US with the highest number of non-organic installation.

Research has revealed that the hospitality industry achieved a remarkable growth in mobile channel booking revenue from \$753 million to \$1,368 million from 2011 to 2012 (PhoCusWright, 2012). Smartphones regularly help tourists in their travels (Kenteris et al. 2009; Wang and Fesenmaier, 2013) and have a substantial influence on the travel activity (Wang et al. 2010).

As shown in the given chart mobile phone internet users are increasing year by year (2015 to 2023) and this rate will be estimated to be grow by 35% in 2023.

Several hotel chains have already proclaimed large amounts of mobile bookings and bright views on the future of the mobile-booking channel and they have projected that tourists will use their gadgets to research travel and accommodation options, book, and communicate room preferences with hotels directly.



Generation X and Generation Y

Howe and Strauss (1991), in their book *Generations: The History of America's Future, 1584 to 2069*, proposed - The Generational Theory; they mentioned that a social generation or cohort is an aggregate of people born over roughly a period of 20 years. They also mentioned that social generation also share same economic, political, and historical events in their childhood, teenager and adulthood stage which make a common belief and develop them to behave in a certain behavior (Howe, N., & Strauss, W. *Generations: The History of America's Future, 1584 to 2069*. New York: William Morrow & Company, 1991).

Generation means human beings those are grouped within a definite similar age group and groomed in similar global conditions, technologies and life events and had

experienced with critical life stages which construct unique set of belief, attitude and behavior (Yusoff and Kiran, 2013; Giancola, 2006; Smith & Cluman, 1997; Pilcher, 1994; Marías, 1970). Cohorts of people are tried to be understood by dividing them according to their year of birth. Many studies have shown that when defining the frames for these different generations, researchers seem to be agreeing on the characteristics of these generations but stating the age differently. Some define the age extremely specifically. Kotler and Armstrong (2006) say that Generation Y consists of those born between the years 1977-1994 and Generation X 1965-1976. Then again, Bolton, Parasuraman, Hoefnagels, Migchels, Kabadayi, Gruber, Komarova and Solnet (2013) follow Brodshah's and Carpenter's (2011) categorization of the generations and define people born between 1965-1980 as Generation X and Generation Y as being born between the years 1981 and 1999.

	Generation X	Generation Y
Outlook	Skeptical	Hopeful
Work Ethic	Balanced	Ambitious
Relationships	Reluctance to commit	Loyal, Inclusive
View of Authority	Unimpressed	Polite, Relaxed
Leadership By....	Competence	Achievement, pulling together
Perspective	Self-reliant	Civic-minded
Turn-offs	Cliches, Hype	Cynicism, condescension

Table (i): Generational perspectives, Source: Raines & Ewing, 2006

This study is confined to Generation X & Y. Both generations are characterized by higher rates of Internet adoption, compared to the older generations. GEN X is one of the most highly educated generations in history and its representatives can be described as technologically savvy, skeptic and pragmatic. On the other hand, GEN Y is considered the first high-tech generation and is perceived as being consumption-oriented and sophisticated in terms of shopping (Lissitsa and Kol 2016).

GEN X (people born between 1965-1980) is one of the most highly educated generations in history and its representatives can be described as technologically savvy, skeptic and realistic. On the other hand, GEN Y is considered the first hi-tech generation and is

perceived as being consumption-oriented and stylish in terms of shopping (Burgiel& Sowa, 2017; Lissitsa and Kol, 2016).

The people born between 1981-1999 as Generation Y (also known as Millennial) and basically characterized as extremely cultured, technology savvy, style consciousness, flexible and invulnerable to old marketing and sales conversation. They are much more ethnically and nationally assorted and segmented. Their buying behavior is extremely exposed by various mass communications and IT advanced tools like Cable TV channels, satellite radio, the Internet, etc.

MATERIALS AND METHODS

For the purpose of this study, Descriptive research design was used and then researcher had studied usage of mobile application in booking of hotels among Generation X and Generation Y. Further researcher had described the relationship between age and technology literacy on online hotel booking under study. Both primary and secondary data was used for this study.

For primary data, a closed ended structured questionnaire was developed to collect data from respondents from Generation X and Generation Y. Secondary data was collected through various books, newspapers, web sites, magazines, journals and by various policy makers.

Review of Literature

The hotel industry is one of the greatest users of new technology. Mobile phones with internet availability support visitors to access a hotel reservation system as well as to view the hotel' location and also lets prospects to go through the hotel reviews that have been posted by existing guests from their previous experiences (Sparks & Browning, 2011; Yu San Ting & Yu Lun Hsu, 2013; DeMicco:2009). ICT and e-Marketing is a necessity in today's hotel industry therefore hotels need to enhance the quality of their websites and update its contents regularly, use m-applications, online booking, e-marketing, social networking, foster a personalized relationship and adjust supply as per the needs of customers to sustain in competitive era. Investment in e-Marketing is efficient and should be considered like investment in funds in form of return it will give (Loncaric, D. &Radetic, N. 2015). Using Technology Acceptance Model (TAM) with three independent and external

variables i.e. compatibility, information quality and e-service quality, the hoteliers can influence the visitor's mindset to use mobile apps (Rodzi. et.al. 2016). As compare to traditional hotel room booking option, Booking through mobile apps give customers many benefits such as convenience, quick responses, 24*7 service and better accessibility to hotel booking service (Abdullah, Jayaraman& Kamal, 2016).

Shopping, Games, social networking and video categories like mobile applications in India are expected to increase by 60% by 2019(Foxconn and Mediatek report, 2019)

Jääskeläinen (2014) states that Generation X trusts the stores, whereas Generation Y trusts others opinions. Both of the generations search for information on the web stores before making a bigger purchase. Generation Y, however, relies more on other consumers' reviews about the product or event, and the older generation prefers to search for information in the manufactures' web pages or in the store itself. (ibid.)

So Lai Man, Stella (2011) has compared the Chinese Generation X and Generation Y females based on the luxury brands and luxury brand values. Brand values, brand attitudes and real brand purchases of the female Generation X and Generation Y were compared in this study. The study concluded that the younger female consumers i.e. Generation Y was different from their older counterparts belonging to the Generation X in terms of their attitudes and values toward luxury brand consumptions. It was concluded that the younger consumers were sawier and more prone to buying the luxury brands.

According to web article posted on talentedheads.com (2013), Generation Y has been shaped by the technological revolution that occurred throughout their youth. They grew up with technology and therefore being connected online is almost in their DNA. They are familiar with the latest technology that keeps them online and connected 24 hours every day throughout the year. Millennials want less structured life, grown up in more media saturated and brand conscious world therefore they mostly prefer internet, digital and social media. They are environmental conscious and very much supportive to social campaign and movement, so the marketers need to make promotional campaign positive, by using emotionally words, theme and images with strong graphics and visual communication (Naumovska, L. 2017).

Spiritual tourists also use internet for reliability, convenience, satisfactory experience and consistency of the information available. On an average, one quarter of the respondents did not know that such information can be found online. Some people either lacked the ability to assess such information or had privacy issues. Considering the easy deployment

of technology provided to the user, to further increase the number and satisfaction of future tourists, the Vaishno Devi Shrine Board should make aggressive efforts to spread awareness about the services available (Gupta &Gulla, 2010). Vaishno Devi Shrine Board recorded the highest arrival of pilgrims in the past five years, with nearly 86-lakh devotees visiting the temple in 2018(The Financial Express, 3rd January 2018)

84% of travelers use the internet as a planning resource and normally they visit an average of 22 sites before booking. The implementation and development of technology help the hotels to increase the service quality level that led to customer satisfaction in hospitality industry. Strategic use of technological factors gives industry executives the ability to gauge that experience and to forecast purchasing habits of current customers, potential customers, clusters of customers and can break groups down demographically for better analysis. Information technology strategy defines information technology (IT) as any hardware, middleware, and/or software including transactions using the internet, network and other digital technologies.” IT tools are used to manage complexity to gain competitive advantage. The threats of new entrants become the threat of new technology that would disrupt the viability of the IT department's operational landscape. Rivalry among existing firms is the threat of internal system development, including end-user development and decentralization of IT activities. (Torres, 2010)

Hosamani, A.P. and Vadiraj, J.S.(2013) conducted study to find out the most important factors while deciding about a vacation plan and the usage of social media and online travel portals from a traveler's point of view. They found in their study that user generated content and online travel review are the most important factor contributing to online travel industry growth, therefore they suggest travel agencies to take the help of social media and travel portals because enthusiastic travelers are more interested to look hotel rating & reviews, e-word of mouth, mode of travel and cost on internet before confirming their vacation plan. The hotel management should also encourage their customers to post their reviews and ratings to attract more visitors.

Erickson (2009) on the blog of Harvard Business Review has compared the Generations of India with the US. She has mentioned how the various social, political and economic conditions prevailing during the various time frames have affected the various Generations of India. Codrington(2011) alongwith the Tomorrow Today research team conducted a detailed survey and showed how the Generational theory can be applied to the various

countries across the world. In his white paper, Codrington writes about how the theory can be applied to a variety of countries in the Eastern hemisphere of the world namely Japan, China, India, South Korea, Vietnam, Singapore, Malaysia, Philippines, Indonesia, Australia and New Zealand.

Mahalakshmi and Dr. K. Jawahar Rani wrote a paper exploring the factors affecting the adoption of mobile and its usage by Generation X and Generation Y in Chennai. The study concluded that Social, Demographic, Culture, and Technology were the influencing factors that affected the behaviour of the Generation X and Generation Y in adoption and usage of mobile phones. The study also observed that Generation X and Generation Y see Mobile phones as fashion items which indicated their social status and power.

Soni, Upadhyaya and Kautish (2011) studied the Generational differences in work commitment of software professionals of India and examined the generational differences for the five types of work commitment -work involvement, job involvement, work group commitment, organizational commitment and professional commitment. The findings of the study suggested that generation is not a sole and good-factor predictor of work values.

OBJECTIVES OF THE STUDY

1. To determine if there is a relationship among Generation X & Generation Y and use of internet in smart phones.
2. To determine if there is a relationship among Generation X & Generation Y and use of internet in smart phone for booking of hotels.
3. To study the relationship between age, gender and income and the use of mobile apps in their smart phones

RESULTS AND DISCUSSION

Respondents were selected through non- randomly snowball sampling technique and primary data was collected through online questionnaire. The questionnaire was complemented by with explanations regarding the importance of the research. The final number of respondents was 108 out of which five respondents don't consider internet as important tool of their mobile phone. The sample was constituted from respondents from both genders, covering different age categories and education categories. The detailed

categorization of sample from a socio-demographic perspective and generation sampled is listed in Table 1.

Table 1: Socio- demographic composition

Parameters	Generation X(1986-1980)		Generation Y(1981-1999)		Total	
Gender	n	Percentage	N	Percentage	n	Percentage
Male	38	35.2	38	35.2	76	70.4
Female	4	3.7	28	25.9	32	29.6
Total	42	38.9	66	61.1	108	100
Education						
10th	7	6.5	1	0.9	8	7.4
Graduate	13	12	22	20.4	35	32.4
Post graduate	21	19.5	40	37	61	56.5
Doctorate	1	.9	3	2.8	4	3.7
Total	42	38.9	66	61.1	108	100
Yearly Income						
Upto Rs. 2 Lac	8	7.4	21	19.5	29	26.9
Rs. 2 Lac to Rs. 5 Lac	12	11.1	22	20.4	34	31.5
Rs. 5 Lac to Rs. 7 Lac	9	8.3	10	9.2	19	17.6
Rs. 7 Lac to Rs. 9 Lac	1	.9	7	6.5	8	7.4
Rs. 9 Lac and above	12	11.2	6	5.5	18	16.7
Total	42	38.9	66	61.1	108	100

Table 1 is used to show demographic profile of respondents and the total male respondents are 76 out of 108. It was very tedious task to collect the data from Gen. X. The data consists of 61.1 of Gen Y and out of which 25.9 % are female whereas among Gen. X the female population was only 3.7%. Regarding qualification of Gen. Y the majority respondents are post graduate (56.5%) and graduate (32.4%) while in Generation X only 0.9%(only one respondent is doctorate) and among Gen. Y 0.9% was matriculate. The collected data was analyzed through IBM SPSS software and following instructions are followed while analyzing the data:

- The dependent variable is on an ordinal scale. All questioned items were either measured on Dichotomous variables(Yes/No) or 5-point Likert scale (Not at all(1) to Definitely(5);
- The independent variable consists of two categorical independent groups.
- The independent variable is the generation in which the respondent belongs. The independent variables the socio-demographic variable - age: there are two independent generations groups considered: X and Y;
- The observations are independent of each other. Each respondent is a different individual and there is no dependency among groups.

Parameters	Generation X(1986-1980)		Generation Y(1981-1999)		Total	
Mobile Phone Type	n	Percentage	N	Percentage	n	Percentage
Window Phone	0	0	1	0.9	1	0.9
I Phone	6	5.6	14	13	20	18.6
Android Phone	36	33.3	51	47.2	87	80.5
Total	42	38.9	66	61.1	108	100
Importance of Internet on Mobile Phone						
Yes	38	35.2	65	60.2	103	95.4
No	4	3.7	1	0.9	5	4.4
Total	42	38.9	66	61.1	108	100
Mobile Apps in a Mobile Phone						
0	1	0.97	0	0	1	0.97
Less than 5	3	2.91	3	2.91	6	5.82
From 5 to 10	13	12.6	14	13.6	27	26.2
From 10 to 15	8	7.77	17	16.5	25	24.3
From 15 to 20	5	4.85	11	10.67	16	15.5
20 or more than	8	7.77	20	19.42	28	27.2
Total	38	36.87	65	63.13	103	100
Frequently go for a Tour						
Yes	10	9.7	30	29.13	40	38.83
No	28	27.18	35	34	63	61.18
Total	38	36.87	65	63.13	103	100
No. of Travels in a Year						
0-5	36	34.93	57	55.34	93	90.3
6-10	0	0	2	1.94	2	1.94
11-15	2	1.94	3	2.9	5	4.85
More than 15	0	0	3	2.9	3	2.9
Total	38	36.87	65	63.13	103	100
Mostly Travel With						
Family & Relatives	27	26.2	42	40.78	69	67
Friends	3	2.91	12	11.65	15	14.56
Business Clients	3	2.91	5	4.85	8	7.76
Business Partners	5	4.85	3	2.91	8	7.76
Others	0	0	3	2.91	3	2.91
Total	38	36.87	65	63.13	103	100

Table 2: Basic Information related to the study

This study was conducted to know the use of internet and mobile application among Gen. X and Y and the general information related to study was shown in Table 2. Out of 108 respondents, 103 respondents are considered important for whom internet is important in their mobile phone. Among them 80.5% respondents are having Android phone and only 1% respondents had windows based phone. In comparative analysis, it was found that Generation Y prefer internet on their phone than Generation X. Both generations X and Y people are not used to go for frequent trip; 93% revealed that they go for maximum five times in a year for trip and only 3% go for more than fifteen times in a year including their

business trip. In context of accompanied persons during their trip, 67% respondents travel with family and relatives while 16% travel with business partners and clients.

As the major data regarding the mobile apps on their mobile phones are categorical henceforth Chi-square test is used which is the nonparametric test that examines the relations between nominal variables and compares the expected and actual distribution of data across categories. The greater the difference between the expected and actual distribution so the larger the chi-square value. Whether the difference is statistically significant (as shown by the p-value) is based on both the size of the chi-square and the number of people in the sample.

Effect size can be thought of as a measurement of the amount of impact an independent variable has on a dependent variable (Murphy, Myers, & Wolach, 2014). Cramér's V effect sizes are generally evaluated as negligible association (.00 and under .01), weak association (.10 and under .20), moderate association (.20 and under .40), relatively strong association (.40 and under .60), strong association (.60 and under .80), and very strong association (.80 and under 1.00; Kotlik & Williams, 2003). Confidence level was taken to be .95 in this study.

Parameters	N	χ^2	p	V	Null Hypothesis
Utility Apps Generation X(1986-1980) Generation Y(1981-1999)	38 65	0.007	.932	0.008	Accepted
Entertainment Apps Generation X(1986-1980) Generation Y(1981-1999)	38 65	3.873	.049	0.194	Rejected
Sports Apps Generation X(1986-1980) Generation Y(1981-1999)	38 65	.103	.748	.032	Accepted
News Apps Generation X(1986-1980) Generation Y(1981-1999)	38 65	5.642	0.018	.234	Rejected
Productivity Apps Generation X(1986-1980) Generation Y(1981-1999)	38 65	4.047	0.044	.198	Rejected
Search Tools Apps Generation X(1986-1980) Generation Y(1981-1999)	38 65	2.820	0.093	.165	Accepted
Weather Apps Generation X(1986-1980) Generation Y(1981-1999)	38 65	0.000	0.986	0.002	Accepted
Travel/GPS/ Maps Apps Generation X(1986-1980) Generation Y(1981-1999)	38 65	2.739	0.098	0.163	Accepted

Table 3 Chi-square test results for the sample.

Further the study was carried out to know about the difference between Generation X and Y regarding the usage of mobile apps in their smart phones. For this information, 103 respondents are asked dichotomous choice questions (Yes/No) regarding installation and

usage of various mobile apps. Regarding having Utility Apps in their smart phone, 71% people responded in positive way even there is no major difference between both generations henceforth null hypothesis is accepted with Cramer's V 0.008. In context of Entertainment Apps, Gen. Y responses are more positive than generation X and the null hypothesis was rejected (where p value is 0.194) where as Both Gen. X and Y both give poor response regarding installation of sports app in their mobile phone but the difference between generation was insignificant so null hypothesis is accepted.

When the respondents are asked about News apps, Generation X response is positively better than Gen Y and there is a significant difference between Gen X and Y henceforth null hypothesis is rejected with p value 0.018. In the case of productivity apps, majority response is No regarding installation of sports app in their mobile phone but the difference between generations was significant and null hypothesis is rejected ($p = 0.044$).

Respondents were asked question regarding search tools app and Generation Y is more prone to use it but there is no big difference between both samples and p value is 0.093 with Cramer's V .165 so the null hypothesis is accepted.

Furthermore we wanted to know about the installation of weather update mobile app on both generation mobile phones, although both the generation have not keen interest to install these kind of mobile app and there was no significant difference so null hypothesis is accepted where p value is 0.986.

Lastly the respondents are asked about the installation and usage of mobile app regarding GPS/ Travel and Maps, Initially the difference was found among the both sample but the difference was not found significant ($p = 0.098$) so the null hypothesis was accepted.

CONCLUSION

India has larger client base of using installed mobile apps than US. According to study it was revealed that India was ranked 29th around the world with \$47 million revenue generated through Google play store and iOS combined as compare to US stands for \$ 3.2 bn.

This study was conducted to investigate the usage of internet and mobile application usage among the Generation X and generation Y. During the study it was found that Generation Y is more likely to use internet on their Mobile phones as compare to Generation X and the qualification level is also improved among Gen. Y as compare to Generation X. Android software base mobile phone is first choice among respondents and

the second ranking was I phone and then Windows phone. Out of total respondents majority share have 5 to 10 mobile apps on their mobile phones but if we look particular generation Y then we can say that 19.42% of total population had more than 20 mobile app in their mobile phones.

FUTURE SCOPE

This study is a preliminary study to know about the usage of mobile application and importance of internet in smart phones of generation X and generation Y. This study further carried out to know the usage of specific mobile application among Generation X, Y and Z with the combination of other demographic variables.

REFERENCES:

- 1) Soni, Swati, et al. "Generational differences in work commitment of software professionals: myth or reality?" *Abhigyan*, vol. 28, no. 4, 2011, p. 30+. Gale Academic Onefile, Accessed 24 Dec. 2019.
- 2) Naumovska, L., "Marketing communication strategies for generation Y–millennials", *Business Management and Strategy*, Vol. 8, 1, 2017
- 3) Murphy, K. R., Myers, B., & Wolach, A. (2014). *Statistical power analysis: A simple and general model for traditional and modern hypothesis tests*. New York, NY: Routledge.
- 4) Hosamani, A.P. & vadiraj, J.S., "an empirical study on customer engagement practices in tourism industry", *International Journal of Marketing and Human Resource Management*, Vol. 4, no. 2, 2013
- 5) Mahalakshmi, S. & Rani, J. "Mobile phone purchase gets on speed dial – capturing the factors affecting the usage of mobile phone and Generation X and Y" *International Journal of Research in Computer Application in Management*, vol. 1 no. 5, 2011
- 6) Gupta, K. & Gulla A.' "Internet Deployment in the spiritual tourism industry: the case of Vaishno Devi Shrine, *Worldwide Hospitality and Tourism Themes*, Vol. 2 no. 5pp no. 507-519 2010
- 7) Erikson, T., "Generational Differences Between India and the U.S. (retrieved from <https://hbr.org/2009/02/global-generations-focus-on-in>)

- 8) <https://www.statista.com/statistics/309019/india-mobile-phone-internet-user-penetration/>
- 9) <https://www.forbes.com/sites/eladnatanson/2018/11/13/indias-app-economy-the-opportunity-is-huge-the-time-is-now/#3681e5612d97>
- 10) <https://www.firstpost.com/tech/news-analysis/average-app-usage-time-in-india-will-grow-by-90-percent-in-2019-report-5504591.html>