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Study of Digital Behaviour and Preferences of College Students in a Tier 2 City in India

Dr. Aditi Acharya

Assistant Professor, Commerce Department, St. Thomas College, Bhilai, Chhattisgarh (India)

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***Corresponding Author**
Email:aditi.acharya0919@gmail.com

ABSTRACT

Internet usage rate is witnessing rapid year-on-year growth in India, largely powered by smartphones. The government has made efforts to set up a strong digital infrastructure to bridge the digital divide. Network operators are making competitive offers to lure in subscribers to opt for their high-speed data services.

The study aimed to investigate the internet usage in a tier -2 city of India, among the youth. A survey was conducted among 151 graduate & postgraduate students of St. Thomas College, Bhilai to know about their preferences & usage patterns. Descriptive statistics in form of pivot tables were used to analyze the collected data.

The survey responses revealed the growing popularity of mobile internet for social networking & interacting with friends and family. Instant messaging emerged as the most preferred means of communication among the youth, with Whatsapp being the most popular messaging app & second most used app overall. Though entertainment apps are being readily embraced by the youth, the same cannot be said for news & music apps.

Youngsters were found to engage in digital shopping on a frequent basis but e-wallets have not yet gained their approval in terms of usage. Though they are habitual online users, their internet usage has not yet reached the point of addiction.

1. Introduction

The age of information was heralded by the digital revolution whereby computers & internet transformed both business & the society. Smartphone has nowadays become a necessity rather than a luxury. It has permeated all aspects of an individual's life including communication, entertainment, shopping, learning etc.

Mobile phones have emerged as the most popular medium for internet surfing around the world based on the data regarding internet usage via different platforms (In September 2018, 51% of global internet traffic in Sep 2018 was on mobile phones, 44% on desktops and 4% on tablets.)[1] Worldwide, internet penetration was 53% in 2017 & mobile internet users comprised of 49% of the total population.[2]

With second highest population in the world, India is also the second largest online market with over 460 million internet users.[3] The smartphone market has expanded in the last decade due to the launching of affordable handsets & initiatives taken by the government in this sector, like Digital India, e-Wallets, Aadhaar projects etc. The mobile penetration in relation to the nation's population was 85% in 2017.[4]During the year, India was the fastest growing market (witnessing an annual growth of 14%) among the top 20 smartphone markets around the world. Chinese vendors dominated the smartphone handset market in India with Xiaomi advancing to first place by beating Samsung. The nation retained its top spot in the feature phone market on global basis & witnessed a 17% annual growth with RelianceJio launching large number of 4G enabled feature phones.[5]

The wireless subscriber base grew by 3.55% as compared to 2016. The number of rural wireless subscribers increased at a higher rate (7.36%) compared to their urban counterparts (0.88%). The spread of data enabled mobile phones led to sharp rise in internet access by the Indians. 2018 saw high demand in feature phone market with Reliance Jio launching its feature phone which provided dual benefits of 4G & cheap data plans to the customers.

As on 31st December 2017, there were 262 internet service providers in India. The total number of internet subscribers was 445.96 million with yearly growth rate of 13.91%. 95% of the users opted for the wireless option & within this category, people accessing internet via mobile & dongle have increased by 58.5% as compared to the previous year. Reliance JioInfocomm Limited, Bharti & Vodafone were the top three service providers in the country in 2017. The market share of these service providers was 35.9%, 22.12% & 15.68% respectively.

If the broadband internet subscription is segregated on the basis of wired & wireless option, then BSNL dominated the wired segment holding 52.53% of the market share and Reliance JioInfocomm Limited emerged as the leader with 37.7% of the market share in the wireless one.[6]

[1] http://gs.statcounter.com/platform-market-share/desktop-mobile-tablet
[2] https://wearesocial.com/blog/2018/01/global-digital-report-2018
[3] https://www.internetworldstats.com/top20.htm
[4] https://www.mobilepaymentstoday.com/whitepapers/carrier-billing-in-india-2018-market-report/
[5] https://www.idc.com/getdoc.jsp?containerId=prAP43569518
[6] TRAI Yearly Performance Indicators of Indian Telecom Sector (Second Edition) 2017

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Just a year has passed since the introduction of 4G technology in India but the data usage in wireless services has shown a huge upsurge of 332.83% (by 4 times) & 4G data usage has risen by 491.86% (6 times). GSM data usage accounted for 99.72% of the total data usage. In this division, contribution of 3G data usage was 15.86% & 4G data usage was that of 81.75%

According to Ookla'sSpeedtest Global Index, during November 2016- November 2017, India recorded second highest improvement in mobile downloads (42.4%) & highest improvement in fixed broadband downloads (76.9%) among the world's most populous countries. [7]

In 2017, app downloads crossed the mark of 175 billion around the world. China, India & United States of America were the top three countries with maximum number of downloads. India clinched the 2nd position after rapid growth in apps stimulated by introduction of 4G access by Reliance Jio.China had the highest app downloads through iOS & India was ranked first in Google Play's worldwide downloads. Globally, on an average 80 apps were installed per smartphone & 40 of them were used per smartphone on monthly basis. Facebook, Google & Microsoft emerged as the top 3 companies which had highest number of app downloads from iOS & Google Play combined. iOS had maximum number of downloads in games, entertainment and photo & video category. In case of Google Play, games, tools & entertainment were the categories where highest number of apps were downloaded.[8]

The paper intends to focus on 3 aspects of everyday behavior that internet has influenced the most, namely, communications, commerce & connectedness. Customer behavior among the youth evolving in these 3 dimensions will be analyzed from 3 perspectives- globally (from secondary research), in India (secondary research) & in a tier 2 city in India (survey based).

2. Literature Review

Mathur et al. (2015) studied the data usage practices in South Africa by conducting in-depth interviews with 43 of their 339 survey respondents followed by analysis of MySpeedTest data usage logs for 121 unique devices. Two thirds of the high-income participants preferred broadband over mobile internet and more than half of the low-income respondents used mobile data for accessing net. They found that unlike home network users, mobile data users have elementary knowledge about data consumption but they were not fully aware of invisible data users or processes that consume data in the background. Cell C & Samsung were found to be popular mobile vendors. Low income respondents prioritized spending on mobile data over their expenditure on basic and luxury goods. The cost-conscious data users (areas with limited/expensive data) tried to optimize their data usage via different means like postponing or switching off data connections, disabling automatic software updates, changing applications' synchronization settings with the cloud and purchasing power or promotional bundles.

Yu Jin et al. (2012) used statistical tools of Markov model & tri-nonnegative matrix factorization to investigate the mobile data usage patterns in U.S. They found that the data usage was highly uneven with small number of heavy users contributing to majority of data usage in the network. They categorized users into two categories namely, normal & heavy users on the basis of network activity matrix. The intensive usage was mainly due to video/audio streaming, mobile apps (photo sharing, messaging etc.) & social media sites. The data access of heavy users not only increased traffic at a particular location but also created extra pressure on overloaded cellular networks.

Sinha (2012) investigated the internet usage patterns among the e-library users of Assam University. He found that among the users, 43% belonged to the age group of 15-25 years & female users outnumbered their male counterparts (62% vs 38%). About half of the users preferred mornings for browsing the net. When extent of usage was considered, half of the respondents used the e-resources on weekly basis & 38% on daily basis. The nature of usage depicted that the purpose was academic in 45% of cases, research in 25% & social interaction in 4% of cases. The common problems reported regarding the accessing of e-resources were limited working hours, lack of sufficient computers, less speed, lack of infrastructural facilities, power failure & downloading issues.

Jones,Yale, Millermaier& Perez (2009) studied the internet usage of 7,421 students in 40 higher education institutions of U.S. 66% of the male respondents had more than 10 years of experience as compared to 56% of their female counterparts. Males were found to be more likely to be online at night while females preferred the afternoon hours for web surfing. Half of the male respondents spent more than 3 hours a day on internet while only one-third of the females did so. Female respondents made greater use of mainstream information sources while male respondents opted for academic journals, online journals, Wikipedia &Infotrac. One-third of the male respondents & one-fourth of the female respondents felt that internet browsing left less time on their hands for engaging in social activities. While females favoured email (59%) as their chosen online communication medium, instant messaging was more popular among the male respondents. Social communication ranked first in activities undertaken by female respondents & entertainment (sports, music, movies, videos, books) seemed to be the main purpose for net surfing of male respondents. Though females were found to be more concerned about their privacy & personal data online, it did not translate into taking more online security measures. Digital divide was found to be more related to home computer ownership rather than socioeconomic status of the respondents.

Cotten&Jelenewicz (2006) held that digital divide based on race for computer ownership & usage have become less pronounced. Though race affected the activities undertaken by the respondents online but neither race nor internet experience had any effect on the level of internet usage of students. On an average, 28 hours per week were found to be spent on communicative purposes on the net & 14 hours for non-

[7] https://www.speedtest.net/insights/blog/global-speed-2017/
[8]https://www.appannie.com/en/insights/market-data/app-annie-2017-retrospective/

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communicative purposes. Whites spent slightly more time in using email & playing games but with increase in usage of internet services, these differences became negligible.

Norum&Weagley (2006) investigated the internet usage of 7000 students of Midwestern U.S. university & found that gender, race & parental income played a significant role in predicting the respondents' ability to recognize & purchase from a secure site. Males (compared to females), Caucasians (compared to Asian & Hispanic) & respondents with parents belonging to higher income bracket (compared to those in lower income groups) were better able to identify & purchase goods & services from a secure site.

Odell et al.(2000) conducted a survey among 843 students of 8 colleges and found that male respondents were more likely than females to research their purchases (36.4% vs 26.6%),browse news on the internet (59.5% vs 39.7%), play games (43.6% vs 26.6%), listen/copy music on the internet (49.6% vs 26.9%). Both male & female respondents spent approximately equal amount of time online. The usage of internet services for females was predominantly for email, bulletin boards & conducting academic research.

3. Objectives

- To study the digital communication habits & preferences of youth
- To study e-commerce habits & preferences of youth
- To study the need for constant internet connectivity among the youth

4. Research methodology

Descriptive research design was adopted for the study. A self-administered questionnaire was used to conduct a survey. The questionnaire had close ended questions with some of them allowing the respondents to select multiple options as their answers. It collected information regarding mobile phones of the respondents, their online activities & their preferences of devices for internet browsing. About 170 undergraduate & postgraduate students of St. Thomas College, Bhilai voluntarily participated in the survey. After discarding the incomplete questionnaires, 151 questionnaires were considered for data analysis using pivot tables.

5. Findings

I. At the national level, a 2017 survey by Google & TNS revealed that 72% of the Indians often use smartphones to access the net. The survey covered 4,000 people, aged 16 and above, from urban and rural areas across 18 states of India.[9]
   a. Easy access to low cost smartphone has made it the primary device used by youth nowadays for accessing internet. 95% of the respondents used it daily, about half (53%) of them used laptop regularly.
   b. Tablets, smartwatches and fitness trackers have not yet established a strong base in the small city of Bhilai with only one tenth of the respondents reported to use one or more of them on regular basis.

II. The rapid adoption of smartphones was clearly visible in respondents' device preferences while engaging in various activities. More than two thirds of the respondents chose smartphones over laptops/tablets for their online social activities & interacting with friends or family (84% for social media updates, 76% for posting on social media, 82% for listening to music, 86% for text chat, 71% for video calls, 67% for checking mail).
   a. They are also catching up fast in the recreational domain (50% for playing games, 46% for watching movies).
   b. However, desktops/laptops still rule the roost when it comes to working on documents (75% preference).

III. Owing to its faster connection and cheaper rates, Reliance Jio is fast becoming the most popular service provider with half of the respondents using it as first choice operator.

IV. Samsung & Apple emerged as most used handsets among the respondents with Xiaomi clenching the third spot.
   a. While the users found the operating system & design of the Apple handset to be most appealing; battery life & camera scored brownie points for both Samsung & Xiaomi.
   b. The two most common problems (irrespective of the handset & network) which the respondents complained about were battery drain happening in case of some activities & poor signal strength.

V. Mobile phones have become the most preferred means of communication, surpassing STD booths n landline phones. But phone call that was much preferred few years back has lost its top spot to instant messaging.
   a. Email was found be to be the least preferred option for youngsters to interact with their friends & families.
   b. Though video calling is being used by the youth, it hasn't been able to outmatch SMS popularity wise.
   c. Mobile network operators provided SMS packs at subsidized rates upto a few years back & now only data pack size-based charges apply. All this adds to the convenience, discretion & swiftness of instant messaging, which account for its high usage.

VI. In case of Tier-2 city Bhilai, social media was accessed more through mobile phone than through laptop/desktop. In case of active social media respondents, Facebook, Instagram & Snapchat were the most popular social media platforms.
   a. However, the top social media platforms across the nation were Facebook, Youtube, Whatsapp, Facebook Messenger & Instagram.[10]

VII. India occupied second position in the world in terms of app downloads and the top spot in app usage. Around the world, Indians spent the highest amount of time on social media sites, with daily usage of about 1.5 hours. Whatsapp, Facebook & Facebook Messenger were found to be the top 3 apps.

[9]https://datareportal.com/reports/digital-2018-india

[10] https://datareportal.com/reports/digital-2018-india

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a. YouTube, Hotstar, Jiotv, Jio Cinema &Voot were the favorite video streaming apps, with Hotstar being the most popular choice.[11]

VIII. However, in case of Bhilai, YouTube, Whatsapp& Gmail topped the app usage chart (YouTube app was used by 90% of the respondents, Whatsapp by 89% of them & Gmail by 88% of them.) Whatsapp was the most popular among messaging apps followed by Facebook Messenger(which was used by 58% of the respondents) & Snapchat (which was used by 56% of them).

a. About two fifths of the respondents reported using entertainment apps (Netflix/Amazon Prime app was downloaded & used by 40% of the respondents, while 34% of them had Hotstar/SonyLIV/Voot/Hooq app installed on their phones).

IX. Music & news apps haven't yet established a strong base, with less than one third of the respondents using it (Gaana/Wynk/Saavn/Apple Music app was installed only by 24% of the respondents. The fate of the news apps didn't seem promising with only 24% of the respondents showing interest towards them.).

X. E-Commerce is also getting popular with Amazon & Flipkart leading the race. However, limited spending power of the students may have affected the extent of adoption (52% of the respondents reported having installed Amazon app & 33% had Flipkart app on their phones.).

XI. Digital shopping is fast picking up pace in tier 2 cities as compared to the national figures. Though all over India, active e-commerce penetration in 2017 was 28%[12], 95% of the participants of the survey admitted making online purchases. This may be due to the absence of retailers with global brands in such places & internet gives the much-needed opportunity to try out the top brands of the world.

a. Online shopping featured as the most common online activity of youngsters which they frequently engaged in, on both the mediums of laptops & mobile phones.

XII. Though the demonetization policy launched by the NDA government led to the introduction of digital payment channels, respondents don't seem to be eager to jump on the e-wallet bandwagon (The usage rates of online payment systems of respondents was as follows- 27% for Paytm, 10% in case of Phone Pe, 11% for Tez Pay, 6% in case ofBhim& 3% for Mobikwik/Oxigen/Freecharge.). Given the percentage of respondents using them, adoption of e-wallets is healthy, but there is scope for growth.

XIII. When considered at the national level, the top e-commerce categories by spending included fashion & beauty, electronics & physical media and foods & personal care. [13]

a. However, in Bhilai, the top 3 areas of online purchases were of clothing, books & fashion/accessories.

b. The two main factors which drove their online purchases were that of discounts & offers (limited disposable income, easy bargains) and convenience (no hassle of going to physical store).

XIV. Tier -2 cities are still not open to the concept of paid apps as about 70% of the survey respondents didn't have any paid apps on their phones & 28% didn't see any value in paying for them.

a. Yet the app makers can lure in some of these potential customers in some areas; for instance, the youngsters were willing to pay for educational (45%), entertainment (26.5%) & gaming (22%) apps if they were only available as paid versions in future.

XV. In India, the average daily time using internet via any device was 7hrs 25mins[14]. But in case of Bhilai, the internet usage was comparatively lesser with 40% of the respondents browsing net for 2-4 hours daily and 30% using it for more than 4 hours.

a. Apart from that, only 7% of the respondents need to be constantly connected to internet.

b. One third of the respondents, though acknowledging the importance of internet, reported that they could survive without it for several days on a stretch.

c. Half of the people who checked onto internet every few hours were online for 2-4 hours on daily basis.

6. Conclusion

The study sought to investigate the digital habits and preferences of youth in a tier 2 city of India with major focus on the areas of communication, e-commerce & connectivity. The findings indicated that the average internet user in tier 2 city is migrating from desktops/laptops to smartphones, just like her national counterpart. Smartphones are increasingly enabling people to have a rich internet experience in activities related to social media, listening to music & interactions via message/mail/video call.

Communication has become instant, ubiquitous & discreet with wide acceptance of instant messaging services. Such facility of "anytime, anyplace connectivity" though seems to facilitate people to keep in touch with others has madecommunication largely impersonal. This trend was also confirmed by growing social media usage in Bhilai which revealed social networks to be the most popular among the respondents. This may be due the fact that such networks provide the youth a chance to connect/reconnect with others, express themselves & seek social validation.

Despite having a huge internet user base, e-commerce in India still lags behind other developing nations like Russia, Argentina, China, Turkey, Mexico, Indonesia, Portugal etc.[15] The study highlighted the fact that economy & comfort drive the youth to engage more in online shopping rather than engaging in traditional store shopping. They are quite comfortable in making purchases from digital stores, yet they seem not so willing to embrace digital payment systems which

[11] https://www.appannie.com/en/insights/market-data/app-annie-2017-retrospective/
[12] https://www.statista.com/topics/2454/e-commerce-in-india/
[13] https://datareportal.com/reports/digital-2018-india
[14] https://datareportal.com/reports/digital-2018-india
[15] https://wearesocial.com/blog/2018/01/global-digital-report-2018

are now a few years old in the country. Their reluctance to break the habit of using cash may be either due to security concerns regarding digital payments, or the pervasiveness of cash, or the fear of tracking of their digital footprint.

The need for constant internet connectivity was found not be acute in the tier 2 city. This may be a consequence of weak signal strength which might be affecting the internet consumption of the respondents. They also complained about battery drain caused by some activities which could have limited their internet usage or their interest in browsing. However, with digitalization initiatives of the government aiming at providing high speed internet services & facilitating government services via electronic medium, one third of the respondents, who said they could do without internet for several days, may change their tune.

7. Limitations of the Study

- The study analyzed a limited sample of college students. A more holistic picture can be formed with data gleaned from a sample comprising of respondents from different social strata & locations (rural & urban).
- The extent & nature of usage of internet among the students was restricted with their limited disposable income & dependency on parents for personal expenditure.
- The effects of services of network provider in terms of speed, tariff & plans in internet usage were not explored in detail.

8. Future Research Directions

- The role of personality of an individual on internet usage can be analysed with emphasis on the factors of self-esteem, extroversion, conscientiousness, neuroticism & openness to experience.
- Longitudinal study of internet usage of students when they go to cities for higher study can be made with the usage during their stay in tier-2 cities.
- Comparative study of internet usage of young customers of different service providers can be undertaken across two or three states.

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