

# The Changing World of Youngsters with Smartphones: A Comprehensive Study

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**Abstract:** The communication technology has drastically changed in the last couple of decades switching from predominated modes of communication to today's more personalized modes of communication. The introduction of smartphones plays a major factor as its adoption rate surpasses even those of the Internet. The study was initiated to analyze how widespread diffusion of smartphones is changing the face of social interaction amongst the undergraduate and postgraduate students. Over 100 students participated in an extensive survey on Campus in the UAE, picked indiscriminately to comprehend the relationship between statistical data of utilization of smartphones and the behavioral insights linked to it.

**Keywords:** Communication, Technology, Smartphones, Survey.

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## I. INTRODUCTION

### A. Communication And Technology:

Communication is an integral part of humanity. Through communication, people use messages to create importance, inside of or crosswise over different settings, societies and channels. The fundamental objective is to exchange vital information between individuals or groups of individuals to understand each other as well as themselves better.

We have made some amazing progress subsequent to the first occasion of verbal or composed written communication. From early stages of speech, along with the primitive use of symbols and pictures to convey messages to one another, we have evolved into communication powerhouse. It is believed by numerous researchers that human evolution is directly linked to technological evolution. This rapid shift in technology is to address the issues and needs of people. The society has greatly benefited by the evolution of communication technology as it has facilitated communication across.

### B. History Of Telecommunication:

Television was the invention of 1920s, internet of 1990s and mobile telephony has emerged as one of the defining technologies of our times. Television is a way of sending and receiving moving images and sounds over wires. It was a great breakthrough at that time by Philo Farnsworth who successfully demonstrated electronic television in San Francisco, in 1927.

The invention of the telegraph, radio, and computer set the stage for this unprecedented integration of capabilities. The Internet is at once a world-wide broadcasting capability, a mechanism for information dissemination, and a medium for collaboration and interaction between individuals and their computers without regard for geographic location. In October 1972, Kahn organized a large, very successful demonstration of the ARPANET at the International Computer Communication Conference (ICCC). This was the first public demonstration of this new network technology to the public [1],[2].

It all started on 10<sup>th</sup> March 1876 when Alexander Graham Bell invented the first telephone with help of his assistant. In 1877, construction of the first telephone line was completed. The line ran from Boston to Somerville in Massachusetts. By the end of 1880, there about 48,000 telephones in the US alone. The rotary dial was born during 1896 by an associate of

American inventor Almon Brown Stronger. This design replaced the existing tap button system of its day. A decade later, the first transcontinental telephone was made by Alexander G. Bell. The first ever mobile phone was made by Martin Cooper while working for Motorola. He is considered as the father of the mobile phone and was the first person in the history to make a handheld mobile phone call in public. The mobile phone launched at that time was almost twice the size of the iPhone of the modern day. This phone was launched and it started selling in the year 1983.

In the 2000s, the first generation of smartphones had flooded the market. Many companies from the beginning competed to launch better features and best price. The world of communication was changed completely. The modes of communication were now redefined like never before.

### ***C. Emergence of Smartphones:***

Smartphones is a race of advanced communication gadgets that have set themselves apart from mobiles. With magnificent computing capabilities, unique design and functionality, these sparkly handheld devices are revolutionizing the social world. The popularity of smartphones has been increasing rapidly in recent years. Two thirds of the population of United States owns a smartphone. This trend is getting up to speed in other developed as well as developing countries. Thus, smartphones have now turned into an essential piece of the day by day lives of numerous people.

### ***D. Impact of Smartphones:***

Smart phones are responsible for the estrangement of oral mode of communication. Smart phones are addictive gadgets that can compromise the interactions between individual friends and corporate executives. This poses a danger of miscommunication because few individuals take social media interactions seriously, this is despite the existence of individuals who value social opinion that a real one. However, it is evident that not much weight is attached to social media statements as compared to physical statements.

Smart phones have unique and special applications that are distinct from other types of phones. However, the unique applications have jeopardized social engagement by limiting the individuals to be engaged in the chat rooms. This is because the applications are only meant for smart phones and only those who use smart phones are better positioned to interact with other smart phone users from all over the world. Given that the society is heading towards a smart phone world, it is apparent that individuals will be investing more time to their screens tweeting and engaging in Facebook forums than meeting one on one with friends and colleagues. That is so because increased number of smartphones will share similar mobile applications hence the ability to interact freely with social mates. This also poses a danger to relationships between individuals. Despite individuals being able to make an array of friends and engage in different relationships at a particular time the intensity of those relationships cannot be quantified, as some persons in the social media are imposters. From the above scenarios, it is apparent that despite relating with different people in different social platforms, no real oral communication is enhanced.

Students can feel their phones flickering in the periphery, in the middle of a lecture. In what seems like a nervous tic — they are compelled to look down on our device every couple minutes, as if there is always something very important to do or to attend to. It is apparent that individuals will be investing more time to their screens tweeting and engaging in Facebook forums than meeting one on one with friends and colleagues.

What became more troubling was realizing how family gatherings have become technology parties where both adults and children sit in the same living room, eyes glued to their devices. Or at dinner parties, where people could be physically there, but with their heads in the technological cloud except during the occasional clinking of glasses. It is a time where individuals can be alone together.

Smart phone effects are not only limited to relationships and oral exchanges, it also influences heavy on individual level of personal development. These modern phones are to blame for the deteriorating education levels. Bringing with it advanced learning engines i.e. in build educational information, smart phones is a threat to traditional learning. Traditional libraries are registering diminishing levels visits courtesy of smartphones. Moreover, a smart phones feature allows its users to access Internet and other social networks during lecture sessions. This is a huge demeanor of learning sessions as individuals engage in unacceptable learning modes. The phones divert student concentration during learning sessions. This destruction by social networks and learns through phones attitude limits the harnessing of information from lecture halls. As far as the move limits the use of libraries and traditional encyclopedias for learning student knowledge is

reduced relatively. In addition, this poses a danger as lecturer student relationships are impacted negatively. Student respect for lecturers' diminishes over time because they are able to access the same information if not better from the social networks.

It is evident that the youth is increasingly networked as individuals in loose, fragmented networks providing on-demand succor, rather than embedded in tight-knitted groups. They can choose who we want to interact with over the network, and overcome physical constraints of the social environment we grow up in. There is a general sense that this represents some sort of freedom that we have never had. But for all the semblance of freedom we have gained, I can't help wondering what we might have lost.

It is heartbreaking to see a world where our lives are being secluded away as we divide our attention between the interminable notifications, emails and social posts. It is Candy Crush that is being chosen over a serendipitous conversation with a random stranger on the train. More so than that, I think we have adopted a new lifestyle without giving enough thought to what it means to be constantly sharing aspects of our lives on our thin simulacrums online. Do radical sharing, openness and personal transparency make us happier, or more lonely and divided?

Is social networking, which smartphones have made enticingly easy, really creating more authentic identities, or entrapping us in a hive mind where groupthink leads to the cult of the amateur and an amnesia of the self? And what about the massive amounts of personal data and digital footprints we leave behind in the public-by-default, private-through-effort Internet culture we live in? And more so than that, the time when it had been easier for everyone to be fully present at a get-together, enjoying each other's company without the distractions of a flicker or buzz on their phones, has .

In spite of the greater part of its negative effects it is difficult to disregard the other side. Smartphones are capable of providing Internet on the palm, thus it opens doorway to a number of conveniences. It leaves the society pondering on most occasions how they ever lived their lives before they had Google Maps, Facebook and the World Wide Web in our hands, and also how it has empowered the individuals by the possessions of these myriad resources.

## II. LITERATURE REVIEW

The core argument of one of the articles, is that we are experiencing a historical movement toward a personal communication society, characterized by the widespread development, adoption, and use of mobile phone [3]. This is indeed the case as we transition from an age of broadcast media toward one in which communication technologies are increasingly personal in nature, giving rise to new symbolic meanings, new forms of networking and coordination, new uses of public space, and new expressions of youth culture [3],[4].

One more study was conducted to highlight trend that is being followed by the fast growth in use of online social networking services (SNS). Extensive use of technology can lead to addiction. This study finds that the use of SNS mobile applications is a significant predictor of mobile addiction [5].

The purpose of another research is to study users and non-users of three selected mobile applications, and find out what really drives the intention to use these applications across users and non-users [6]. A Web survey of 1,715 college students was conducted to examine Facebook Groups users' gratifications and the relationship between users' gratifications and their political and civic participation offline. A factor analysis revealed four primary needs for participating in groups within Facebook: socializing, entertainment, self-status seeking, and information [7].

Another study examined the impact of smartphones on social behaviour and relationships, investigating smartphone use, present absence, phone etiquette, face-to-face communication and computer-mediated communication. Results showed that smartphone use and preference for computer-mediated communication were predictors of present absence. Additionally, age was positively related to phone etiquette and preference for face-to-face communication and negatively related to smartphone use, present absence, and computer-mediated communication. Differences highlighted, included higher levels of phone use and present absence, and lower levels of phone etiquette among smartphone users, compared to standard mobile phone users. In conclusion, smartphones undoubtedly have both pervasive and negative influences over users and it would be valuable if future research focused on the possible reasons for this. [8]

A study to explore the relationship between motives of smartphone use, social relation, and psychological well-being was conducted. The correlation analysis shows that the motives of smartphone use were positively related to bonding relations but negatively related to bridging relations. The hierarchical multiple regression analysis finds the associations among motives of smartphone use, social relations, perceived social support, and variables of psychological well-being. The results demonstrate that needs for caring for others were negatively related to loneliness and depression and positively related to self-esteem. However, the communication motives are not a significant predictor to determine self-esteem, loneliness, and depression. In addition, bonding and bridging social relations and social support significantly increase self-esteem and decrease loneliness and depression. [9]

The aim of another study was to review the impact of smartphones on academic performance of students in higher learning institutions. Intensive literature review was done finding out the disadvantages and advantages brought by smartphones in academic arena. In the future, research will be conducted at Ruaha Catholic University to find out whether students are benefiting from using smartphones in their daily studies and whether do they affect their GPA at the end of the year. [10]

### III. EXPERIMENTAL SETUP

A survey was conducted in the premises of BITS Pilani, Dubai Campus, in which 100 undergraduate and postgraduate students from multiple streams were randomly picked circulated among the students using a Google form. They were given 10 minutes to fill out the form. They were not allowed to interact while filling it out and also they were not allowed to change their answers. This was done to ensure that the recorded responses were uninfluenced at all times.

### IV. ANALYSIS

The survey was taken by 76% of the people in the age group of 19-24 years as that is the average age group of college students. 12% people were between the range of 14 to 18 years. Another 12% were the postgraduate students who participated in this study. There were 67 males and 33 females amongst the diverse crowd. Over 98% of them, admitted that they owned a smart phone. Additionally the reactions uncovered that no less than 64% of the general population considered 2000 AED to 3000 AED a sensible sum for a fresh out of the box smartphone.

They were also requested to give their most used applications. The responses picked Whatsapp as their favorite with 98% majority; Internet browsing and social networking applications were next. Also gaming applications such as candy crush, clash of the clans etc. were mentioned as well. There were about 75% of the responses that clearly concurred that cell phones is the reason of absence of oral-correspondence. Just about 82% people use phones while travelling, 71% use while hanging out with companions and 60% use it while they are on supper table. There were 53% of the participants that admitted to not being able to survive without their phones. 18% of the responses supported that phone is a way for them to avoid conversation for them.

Also the detailed results of time consumption on which feature of the smartphone have been tabulated below.

**TABLE I : DETAILED TIME CONSUMPTION ON PARTICULAR FEATURES ON AVERAGE DAILY**

Feature	No usage (in %)	Under 1 Hour (in %)	1-2 Hours (in %)	2-3 Hours (in %)	More than 3 Hours (in %)
Camera	15.2	78.2	4.3	2.2	0
Calls	2.2	58.7	26.1	10.9	2.2
Internet Browsing	2.2	39.1	21.7	28.3	8.7
Social Networking	4.3	19.6	34.8	23.9	17.4
Gaming	32.6	39.1	15.2	4.3	8.7
Text Messaging	15.2	39.1	17.4	13	15.2

65% of the participants of this study have admitted that spending time with family and friends has reduced with the wide variety of facilities available on phone that consume our precious time. Also almost 60% of the students agree that smartphones is one of the reasons for not having enough time to pursue other activities.

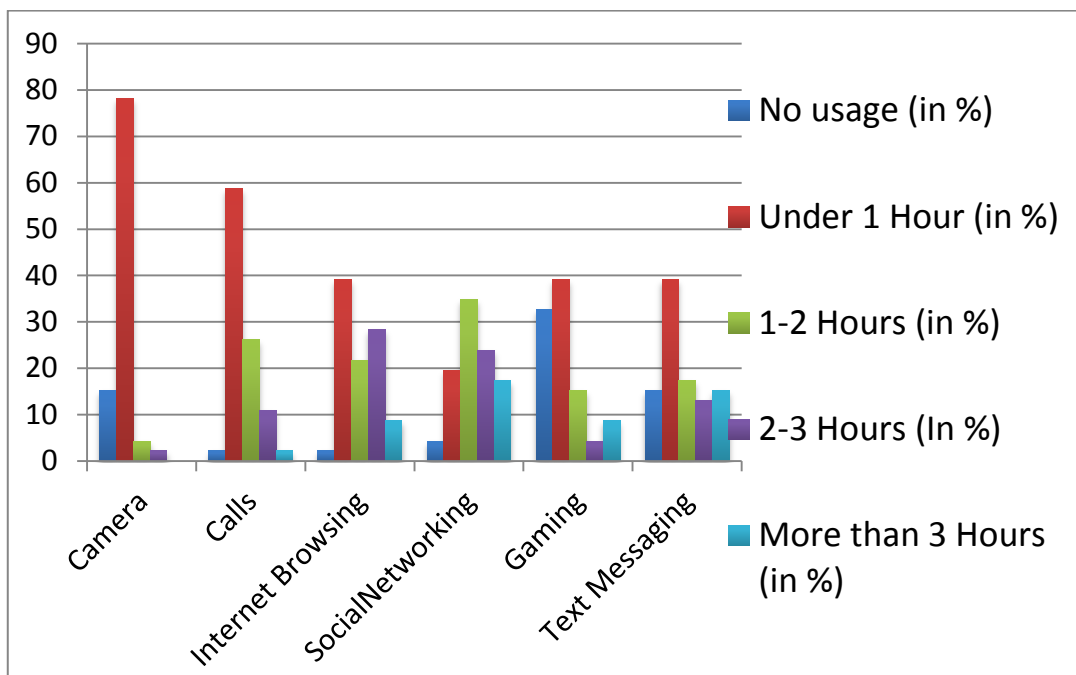


FIGURE I: GRAPH TO THE CORRESPONDING TABLE ABOVE

## V. CONCLUSION

The survey was made keeping in mind target as youth and significant focus was given to college students. The understudies were picked at random. Smartphone's reception rate is tremendous among youth as there were hardly any responses, which did not own a smartphone. It reflects that its become a part of the culture to own a smartphone. It doesn't stop there, it is a common thing to see a considerable amount of money being thrown around just to match the levels of peers.

As far as smart phones are revolutionizing the mode of communication and enhancing the levels of interaction between remote and urban people, they are alienating and limiting people interactions. However, smart phones are helping connect individuals whose relationships are complicated by geography and distance. Despite being of significance uniting distant individuals, smart phones have helped extend the gap between close individuals and increasing distance between them. From the aforementioned, it is apparent that the coming into force of smart phones has hampered oral communication greatly. In my considered opinion, despite bringing with it advanced computing capability, in the ethic aspect, it is not of much importance to get a smart phone. This is because it will help one distant him/herself from close people. These phones come with many benefits i.e. it can be used as a library, it can multitask etc. but it can influence your social life negatively.

Having said that, because technology explosion cannot be controlled, individuals need to acquire these new gadgets but not let their lives be controlled fully by these objects. Let them control the use of these smart phones to be able to interact with their friends and colleagues freely.

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