Impact of Information Technology towards Digital India

Dr. Sachin Garg

Deptt. Computer Science, Aggarwal College Ballabgarh, Distt. Faridabad (Haryana) India - 121004

E-mail: sgarg213@gmail.com

ABSTRACT

Information Technology has been one of the most encouraging research areas throughout the globe over the past two decades. This paper involves highlighting the recent developments which has happened in field of Information technology along with its impact towards digital India. The goal is to show that IT is becoming an integral part and parcel of daily lives along with businesses as usual way of reducing cost and improving efficiency. This Paper has shown how recent industry trends are changing the way business is done. Despite the boom in the advancement of Information technologies, Digital split is deepening and the gaps in the usage of advanced communication resources between countries and regions widening. This work also reported in this paper is based on the results of the pilot study conduct in Faridabad of NCR region by means of questionnaires drifted in rural as well as urban areas with a focus to make changing face of digital India.

1. Introduction

Information Technology has transformed the world into a "Global Village" narrowing the geographical and cultural boundaries. Information Technology is the key resource for the development of an individual, society, community and the nation. On the Contrary ICT development has also enhanced the problem of serious digital divide in developing countries. In such countries, people do not have access to the internet and ICT's and an amazingly large number of people do not have the abilities to use the ICT's in a proper way, therefore cannot draw advantages from its usage. According to the IAMAI Report 2012[1], though Internet in India has crossed the tipping point of 100 million users in 2011, still only a modest 20% of urban and only 3% rural Indian are connected.

So, it is essential to have an insight into the continuing research innovations, enhancements, evolution of technology and practices in the area of Information Technology. This paper has the essence on the recent advancements from technologists, scientists, academia, and researchers together and provides direction to the efforts being made in progressing this emerging and futuristic technology.

Computer and Information Technology (CIT) are now involved in governmental, industrial, and business domains more than ever. Thus, it is important for CIT personnel to continue academic research to improve technology and its adoption to modern applications. The up-to-date research and technologies must be distributed to researchers and CIT community continuously to aid future development.

2. RECENT INDUSTRY TRENDS TOWARDS IT:

The following is the list of recent industry trends changing the face of IT to help the business prepare for the fast approaching future:

a) **Mobile Devices --**The basic tools that businesses and consumers use to interact with each other are currently undergoing a major behavioural shift. More than one-third of the conventional PC market is on the verge of being replaced by smart phones and tablet computers in the coming year and this trend shows no signs of slowing. By 2015, it is predicted that mobile Internet usage will overtake

traditional desktop usage. Example: Newly developed technologies have enabled more RAM possible in smallest of smart phones possible with least possible pricing.

b) **Cloud Computing --**also known as 'on-demand computing', is a kind of Internet-based computing, where shared resources, data and information are provided to computers and other devices on-demand. It is a model for enabling ubiquitous, on-demand access to a shared pool of configurable computing resources. Cloud computing and storage solutions provide users and enterprises with various capabilities to store and process their data in third-party data centres. It relies on sharing of resources to achieve coherence and economies of scale similar to a utility (like the electricity grid) over a network. Cloud computing has now become a highly demanded service or utility due to the advantages of high computing power, cheap cost of services, high performance, scalability, accessibility as well as availability..
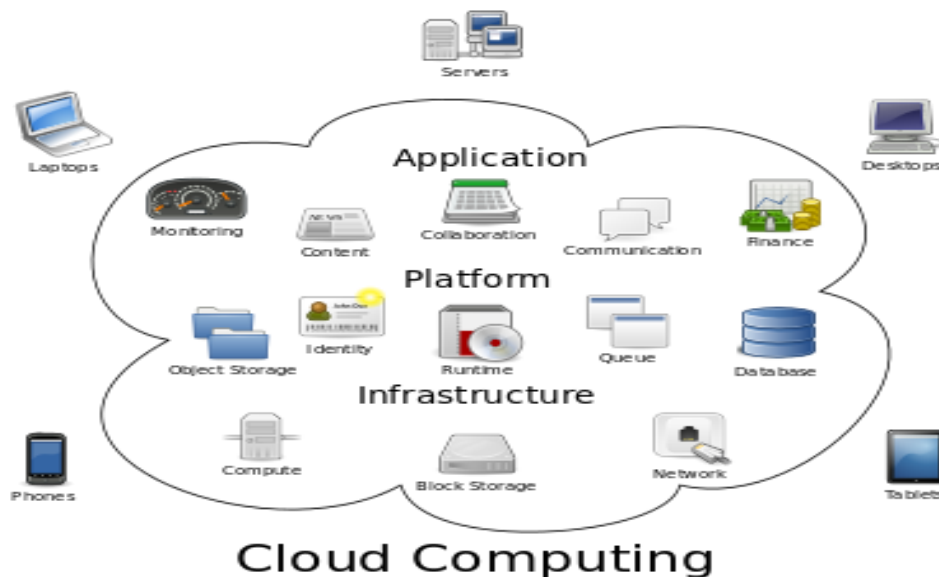
c) **Virtualization --**In computing, virtualization refers to the act of creating a virtual (rather than actual) version of something, including virtual computer hardware platforms, operating systems, storage devices, and computer network resources. Hardware virtualization or platform virtualization refers to the creation of a virtual machine that acts like a real computer with an operating system. Instead of maintain IT Infrastructure in house, which is very expensive, companies are outsourcing this requirement to other companies which are into this service

(Infrastructure as a service-Iaas) and pay as per you go model. Major players into such kind of services include Netmagic, Dimensions Data, Cisco, IBM etc.

d) **Virtual Offices --** A virtual office provides communication and address services without providing dedicated office space. It differs from "office business centres" or "executive suites", which do provide office space. The term "virtual office" implies space utilization, but a full application includes professional live communications. Voicemail is a low-cost technology that stores voice messages electronically. Recent advances in technology allow for the conversion of Voicemail messages to email making message retrieval far more convenient for business owners. Virtual office gives you a chance to own a high profile reputed address in a city of your choice, at a fraction of the buying or renting cost of such an address. Example: Cloud telephony services by companies like Exotel, Knowlarity etc through which you don't need landline phones and reception at office location. Customers are given cloud telephony number (which looks like a landline number) and call is routed to mobile number of employees.

e) **Alternative Productivity Applications –** Productivity software's are dedicated to producing information, such as documents, presentations, worksheets, databases, charts, graphs, digital paintings, electronic music and digital video. Its names arose from the fact that it increases productivity, especially of individual office workers, from typists to knowledge workers, although its scope is now wider than that. Example: Hipchat for group messaging within the organization, Skype for video conferencing, RT(Request Tracker) for support ticketing. Best part of all these software's is that they are open source and available free of cost to use and they are contently updated and developed by Geek community all over the globe.

3. DIGITAL PARTITION: In the 1990's with the recognition that most of the people in many countries were not going online or not getting connected, the notion of digital Partition gained attention. Pippa Norris [2] suggests that there are at least three e major divides: 1. A global divide between the developed and undeveloped worlds, (2) a social divide between the information rich and the information poor. (3) a democratic divide between those who do and those who do not use the new technologies to further political participation. The term digital divide has been coined to distinguish between those who have access to internet and are able to make use of the services offered on the World Wide Web and those who are excluded from these developments.

4. METHODOLOGY: A questionnaire was prepared and circulated among 750 persons of NCR region, Out of which 225 persons responded.

5. Objective of Study:
- The objective of the pilot study was to elicit through questionnaires and interviews the major barriers to the use of internet.
- To find out the problems faced by the respondents while using the internet.

6. Hypothesis of the Study:
With the help of the available theoretical literature, the major hypothesis was framed for the study:

- Low technological knowledge
- Fear of using the costly technology

- ▪ Linguistic Diversity
- ▪ Internet Access & cost of Internet
- ▪ Unawareness of the ICT programmes and the advances in technologies.
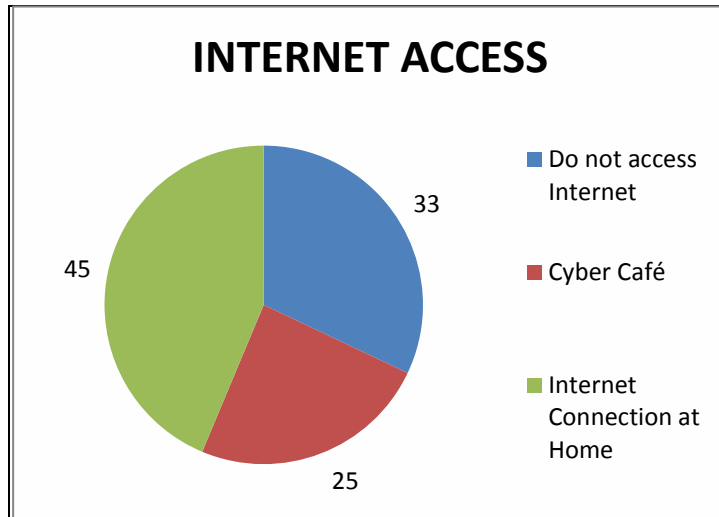

Fig.1

The pilot study was done under the following age groups and data was collected from rural as well as urban areas:

Category	Age	No. of Respondent
Young Group	15 yrs to 35 Yrs	65
Middle Age Group	36 Yrs to 59 Years	85
Old Age Group	60 to 80 Years	75

7. FUTURE SCOPE AND LIMITATIONS:

It is necessary to recognize the limitations of the current study. One limitation is the small sample size. To examine the digital divide factors accurately, a larger sample is desirable. Further research needs to focus on larger cross section of internet users by employing more diversified samples.

8. CONCLUSION

The face of IT is changing rapidly and there's no going back. The information technology (IT) industry has become of the most robust industries in the world. IT, more than any other industry or economic facet, has an increased productivity, particularly in the developed world, and therefore is a key driver of global economic growth. The IT industry can serve as a medium of e-governance, as it assures easy accessibility to information. On the basis of above hypothesis and the result of the survey conducted, it is concluded as under: It was

observed that the respondents who did not have internet provision at work either used internet at home or visited a cyber cafe. Out of these respondents 45% had internet connection at home, belonging to urban areas in the age group of 15 to 59 years, 25% visited cyber cafe in the young age group and 33% respondents had never used internet and this group includes 20% of respondent from middle age group and 80% from old age group. Lastly, while the government has made a beginning, it is a modest beginning at best. Government initiatives alone will not be sufficient. People should come forward on the road to digitization to transpose the India towards digital India.

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