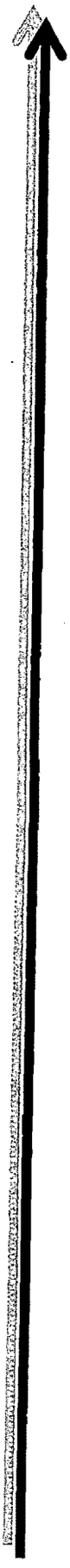

CHAPTER ONE

INFORMATION TECNOLOGY (IT) INDUSTRY IN INDIA AND GUJARAT: AN OVERVIEW

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1.1: AN INTRODUCTION:

Information Technology (IT) may be defined as the convergence of electronics, computing, and telecommunications. It has unleashed a tidal wave of technological innovation in the collecting, storing, processing, transmission, and presentation of information that has not only transformed the IT sector itself into a highly dynamic and expanding field of activity creating new markets and generating new investment, income, and jobs but also provided other sectors with more rapid and efficient mechanisms for responding to shifts in demand patterns and changes in international comparative advantages, through more efficient production processes and new and improved products and services. All sectors of the economy have been influenced by the development of IT applications(www.unu.edu)[1].

Software sector comprises of IT Sector and ITES Sector, Information Technology (IT) sector, and IT Enabled Services Business Process Outsourcing (ITES-BPO) Sector. The IT sector provides basically the root services, that is Networking; Software Installation; System Integration and Operating system (OS) Development. ITES-BPO segment constitutes the supporting services such as Customer Care; Finance, and Human Resource Development, Engineering Design; Simulation; Animation and Research and Development activities. ITES-BPO segment thus has a tremendous scope to grow further, in contrast to the IT Services sector, which has limitations in growth (Vipan kumar, 2003)[1].

The development of the Indian software industry had a slow and hesitant start in the mid-1980s, and then captured in the 1990s. In the year 2000, the software industry of India generated revenue of US $5.7 Billion, with US $4 Billion from exports. India's software exports represented 10.5 per cent of India's total exports in the year 2004-2005 and recorded a growth of $200 Billion in the year of 2008-2009. (www.iimcal.ac.in)[2].

1.2:A BRIEF REVIEW OF IT(INFORMATION TECHNOLOGY) SECTOR WORLDWIDE AND INDIA :

IT services form the largest segment of the world-wide spends on technology products and related services. The India domestic IT and ITeS market is expected to cross Rs. 2, 00,000 Crores in the year 2012 compared to Rs. 90,014 Crores recorded in the year 2007.

IT market grew at 22.4 per cent in the year 2007. IT sector market size is estimated at over US$1.5 trillion. Software and IT-BPO services accounted for over 70 per cent of the total market size in the year 2007. Spending on Engineering and R&D excluded above estimated US$780 Billion. Spending on IT services was estimated at US$470 Billion growth of 5.9 per cent over US$ 444 Billion in 2007.In IT services, outsourcing is the largest and fastest growing category. In the year 2007, the spend on IT outsourcing was estimated at over US$ 170 Billion, which was 36 per cent more than in the year 2006(www.gujaratIndia.com)[3].

1.2.1: World Wide Growth of IT Sector:

IDC(International Datametics Corporation) is the premier global provider of market intelligence, advisory services, and events for the IT, telecommunications, and consumer technology markets. IDC estimated that in the year 2009, the worldwide IT market growth would be lower at about 5.5 to 6.0 per cent, mainly due to the economic slowdown in the USA and World Economy. IT-BPO services grew at an above-sector-average rate of nearly 8 per cent and remained the largest category, accounting for an increasing share of the worldwide technology sector revenue aggregate in the year 2008.

Worldwide technology products and related services sector were estimated to grow at 7.3 per cent to reach US$ 1.7 trillion in the year 2007. The Indian IT and ITeS industry grew to Rs. 2, 46,609 Crores in they year 2007, up from Rs. 2, 01,413 Crores in the year 2006, representing a growth of 22.4 per cent. The IT and ITeS exports market is likely to be more than double to reach figure of Rs. 3,20,278 Crores in the year 2012 from Rs. 1,56,594 Crores of the year 2007. The domestic IT and ITeS industry recorded a growth of 18.4 per cent in the year 2008-2009 (www.idcIndia.com)[4].

Outsourcing refers to a company that contract with another company to provide services that might otherwise be performed by in-house employees. Many large companies now outsource jobs such as call center services, e-mail services, and payroll. These jobs are handled by separate companies that specialize in each service, and are often located overseas. Outsourcing also allows companies to focus on other business issues while having the details taken care of by outside experts. This means that a large amount of resources and attention, which might fall on the shoulders of management professionals, can be used for more important broader issues within the company (www.wisegeek.com/ outsourcing.htm)[5]

Outsourcing continued to be the primary growth driver, sustained by gradual shifts in regional spending patterns with increasing traction in Europe and Asia Pacific offsetting a marginal decline in share of the Americas. IT spending in the BRIC countries - Brazil, Russia, India, and China was expected to grow by 16 per cent in the year 2008, reaching figure of USD 115 Billion.

Other emerging economies based on 10 percentage and the greatest net-new IT spending potential by the year 2012 included Mexico, Poland and Turkey, followed by Vietnam, Thailand, Saudi Arabia, Argentina, Colombia, and United Arab Emirates.

Underlying this steady growth in services spends is the increasing adoption and continued evolution of the global sourcing supply-chain. Global sourcing of technology related services was estimated grown by about 30 per cent to reach figure of US$ 70 to 76 Billion in the year 2007.

Increasing emphasis on innovation-led growth added to the secular trend in technology related spending, with IT-enablement and global delivery now being recognized as complementary means of effectively increasing productivity, reducing time-to-market and thereby increasing the returns on innovation investment.

Green IT starts with manufacturers producing environmentally friendly products and encouraging IT departments to consider more friendly options like virtualization, power management and proper recycling habits. The Government has also proposed new compliance regulations which would work towards certifying data centers as green. Some criteria includes for green IT is using low-emission building materials, recycling, using alternative energy technologies, and other green technologies(www.webopedia.com)[6].

Green IT was expected to be an important highlight during in the year 2008. According to the Green IT Survey conducted by IDC, over 50 per cent consider suppliers' greenness while buying IT, almost 80 per cent the next enclosed that the importance of greenness as an IT buying consideration and, over one-third have policies that shall favor green vendors. The Indian IT-BPO industry is on track to reach US$ 60 Billion in exports and US$ 73 to 75 Billion in overall Software and Services revenue, by the year 2010. At the aspired levels of growth, this sector would, employ around 2.5 to 3 Million professionals, directly and shall account for Direct Investment of about USD 10 to 15 Billion, which would contribute 7 to 8 per cent of the National GDP in the year 2010.

However, the scope of the opportunity is significantly larger. At US$ 52 Billion excluding Hardware, India accounted for around 4 per cent of the worldwide spend on IT Software and Services. The global sourcing penetration is estimated to be growing at nearly four times the rate of absolute technology spends. These two trends signify a huge opportunity for the Indian IT-BPO industry (www.gisdevelopment.net)[7].

1.2.2: The Growth of IT Sector In India:

As in most countries, computers and IT have been around for a long time.But, considered as an industry gaining global recognition and as having an internationally competitive future, IT's much publicized growth recorded in India in the year 2006. Software exports, the earliest harbinger of a more widespread IT expansion, began only in 1985, when Texas Instruments established its subsidiary at Bangalore. This move was followed not only by other foreign software companies setting up Operations in that city and elsewhere but also by a number of domestically-established software companies such as Tata Consultants, Wipro, Infosys, HCL Technologies and others.

In the year 2007, the Internet expanded globally, these earlier investments were followed by an explosion of start up Internet companies and by early efforts of a few well-established manufacturing companies in using the Internet and other forms of communication to improve their operational efficiency (www.altassets.com)[8].

The Information and Communication Technology (ICT) Sector comprises of both Manufacturing and Service activities. The Planning Commission's approach to the Eleventh Five Year Plan emphasized to concentrate on ICT services towards faster and more inclusive growth by aiming at increases in (a) the tele-density in comparison with other countries; (b) rural tele-density compared with urban through private sector, and mobile telephone expansions; (c) Internet connectivity for Text, Data and Image communications, and (d) larger and speedy connectivity through wireless technology and on Fibre Optic Cables(www.blonnet.com)[9]. The domestic IT market in India grew by 22.4 per cent in the year 2006(www.ciol.com)[10].

The Ministry of Information Technology were to set up 100 Million Internet connections in the year 2008 and one Million Internet-enabled IT Kiosks/Cyber Cafes were to be established across India to facilitate implementation of citizen-based e-governance applications and to provide easy access of information. In order to take a concerted and focused approach to developing IT sector, the Government of India decided to set up the Ministry of Information Technology in October 1999 as the Nodal Ministry for all initiatives in this area. The Ministry of IT targeted to implement a comprehensive action plan to make India an IT power and achieve a target of US $50 Billion in Software exports in the year 2008. It aimed at also to facilitate achievement of the objective of creating wealth, employment generation, and IT-led economic growth. The role of the Ministry of IT shall be to become a proactive facilitator, motivator, and promoter. (www.cosmoc.org)[11].

According to a study undertaken by the IMRB (Indian Market Research Bureau), a mere 30 per cent of businesses in India, which have the means to access the Internet, have an Internet connection at their premises. Global Electronic Commerce, the e-commerce arm of Global Telesystems, has invested in state of the art Asynchronous Transfer Mode Frame Relay Network connecting 14 cities. It was being expanded to 27 cities to enable 8,000 corporate customers. It has also pioneered in the creation of Business-to-Business Portals. (P.Subba Rao, 2001)[2].

One of the studies on IT investments appeared to improve labour productivity to the point that it accounted for 28 per cent of growth in GDP. Moreover, IDC found that companies with strong IT investment levels usually measured by the ratio of IT spending to GDP seems to be able to better weather economic storms than those with less focus on IT. In brief, during 1960s to 2000, the IT industry sold $40 Trillion of hardware, software and services and, it aims to sell more than $15 Trillion by the year 2015. The total numbers of jobs in the emerging countries in the study revealed were expected to equal to those in the developed countries (www.IDC.com)[12].

Strong fundamentals of a large talent pool, sustained cost competitiveness and an enabling business environment can help India sustain her position as the most preferred sourcing destination. India's young demographic profile, complemented by a vast and growing academic system continues to add to its pool of educated talent. There is no other country such as India that offers a similar mix and scale of human resources. While some gaps in talent suitability still exist, it is being adequately addressed through strong provider-level initiatives with focus on skill development.

The Indian IT-BPO sector has built a strong reputation for its high standards of service quality and information security that has helped in improving buyer confidence. Supportive policies and active private enterprise have helped in creating an enabling business environment to facilitate the rapid growth of Indian IT-BPO. The policy of Government of India has played a key role in catalyzing growth and in order to aid growth with progressive reforms. The private sector has joined hands in form of partnership with the State and Centre Governments increase its role in overall infrastructure development to India.

India continues to deliver a significant cost advantage, driven by a wide significant differential in wages and other lower factor costs. Sufficient demand, strong fundamentals, and a favourable environment offer a positive outlook for domestic Market and Indian IT-BPO exports .The Indian IT-BPO industry is expected to reach US$ 60 Billion in exports and USD 73 to 75 Billion in overall Software and Services revenue, by the year 2010.

The Indian IT-BPO sector would employ around 2.5 to 3 Million professionals, and shall account for direct investment of about US$ 10-15 Billion, and contribute 7 to 8 per cent of the national GDP by the year 2010. At US$ 52 Billion excluding hardware, India accounts for around 4 per cent of the worldwide spending on IT Software and Services. The global sourcing penetration is estimated to be grow at nearly four times the rate of absolute technology spends. To conclude, together these two trends signify a huge opportunity for the Indian IT-BPO industry.

In order to sustain India's edge in the global markets and for improving revenues, Indian IT-BPO service providers need to shift towards more market-facing breakthroughs. It could enter in to new customer segments in Intellectual Asset-Intensive Service Lines like Engineering and R&D Services, creating IP in emerging technology areas; developing and codifying specific domain expertise to target consulting and system integration services, and technical innovations to develop its own standards for next generation of technologies.

Finally, Indian IT- BPO Service providers could enhance their role in improving role quality of education, by working closely with the Government and academia to facilitate changes in the curriculum and pedagogy, that would directly influence the quality of graduate output(www.nasscom.org)[13]

1.2.3: Market Scenario for Broadband in India:

Broadband refers to telecommunication that provides multiple channels of data over a single communications medium, usually using some form of frequency or wave division multiplexing and handles a relatively wide range of frequencies, which may be divided into channels or frequency bins. The wider the bandwidth, the greater would be the information-carrying capacity (www.dleg.state.mi.us)[14].

The broadband market is being targeted by a number of large international players, as well as domestic companies like Bharti, Tata, Reliance and Sify. But, the main projections for the growing broadband market have been made on the basis of Bhartiya Sanchar Nigam Limited's (BSNL) aggressive approach towards broadband. The Indian broadband market is presently perhaps the only one where telecom giants, Internet service providers, cable operators and even the Indian Railways are competing for a piece of the pie.

According to Dr Subho Ray, President of the Internet & Mobile Association of India(IAMAI), "the broadband market seemed very lucrative for a number of reasons (www.iamai.in).

Such as over 35 Million Indian households already possess cable TV connections. The players entering the broadband market estimated that even if small portions of this segment opt for a broadband connection, the potential market would be very huge. Those factors that are responsible for an improved the broadband footprint in India are viz., increase in PC penetration across homes, increase in awareness of broadband and related applications, increase in availability of broadband services with the entry of telecoms; Government focus, and decrease in the cost of bandwidth(www.iamai.in)[15].

1.2.4: Broadband Penetration in India:

As per the findings of Telecom Regulatory Authority of India (TRAI), the number of broadband connections in the India crossed 2.9 figure of Million at the end of the year 2009. The Broadband Policy of India issued by the Government in October, 2004 provided for fixation of the Quality of Service Standards for Broadband Service by TRAI. At the time of issue of the Broadband Policy, Broadband connections in India there were 50,000 broadband connections that crossed figure of 20, 00,000 connections as at December 2008(www.trai.gov.in)[16].

The growth of broadband connections in India increased by 185 per cent during the years 2005 to 2006. India had 1.825 Million broadband subscribers as of September 2006, While overall penetration is still small, the growth rate is very high (www.iipa.com)[17].

In the 1990s, India has developed into a major and credible (IT) Outsourcing Centre. The IT sector of India is one of the fastest growing segments of Indian industry. The major achievements of IT sector of India include viz., the development and tremendous success of the software industry, large-scale computerizations and Internet usage, IT-based automation in various industries, and development of supercomputer technology. The Internet and other advances in IT have ushered India into an era where various services can now be delivered remotely. Time and distance barriers have been dismantled as software companies provide Customer Interaction Services, Help Desks, Medical Transcription, Translation, Localization Services, Data Digitization; Legal Databases, Data Processing, Back Office Operations, Digital Content Development, Remote Network Management and Specialized Knowledge Services to both domestic and foreign customers(planningcommision.nic.in)[18]

1:3: AN IT ACT OF INDIA:

In India, the Information Technology Act was passed in the year 2000, based on the Model Law, and it came in to force with effect from 17th October, 2000.The IT Act, was enacted in June 2000 considered a wide range of e-commerce and Internet-related criminal offences in form of a regulatory framework for cyber laws. It has laid down punishment regimes for different cyber crimes and offences.

It is aimed at providing of an overly complex piece of legislation. Thereafter, It is being followed up by the United Nations Commission on International Trade Law [UNCITRAL] Model Law on E-Commerce.

The Information Technology Act, 2000 has covered various aspects relating to Legal Recognition for Digital Signatures; Electronic Governance, and offers the Regulatory framework that provides for the appointment of a Controller of Certifying Authorities, Adjudication Officers and one or multiple Cyber Regulations Appellate Tribunals. The IT Act, 2000 has followed the Model law to a considerable extent. However, there are some areas where it differs from the Model law.

These deviations in case of the IT act of India that are distinctive from the Model law are in three key areas viz., Digital Signatures and provisions relating to Online Contracting as well as Time, and Place of Dispatch of Electronic Records which are probably carried out with the legal and economic conditions prevalent in India. UNCITRAL has adopted a Model Law on Electronic Commerce in the year 1996. The United Nations in 1997 recommended that all member countries should give favourable consideration to the Model Law. (C. M. Abhilash, 2002)[3].

1.3.1: Salient Features of IT Act of India:

The Government of India has simultaneously also amended various other Acts viz; The Indian Penal Code Act, 1860; The Indian Evidence Act, 1872; The Reserve Bank of India Act, 1934; and The Banker's Book Evidence Act, 1891; The IT Act, 2000 gave legal recognition to electronic records. It offered legal recognition to digital signatures and provided for certifying authorities and subscribers in connection with digital Signature. It also made provision for penalties for cyber offences, and suggested for setting up Cyber Appellate Tribunals.

According to IT Act, 2000 digital signature has defined as an means authentication of any electronic record by a subscriber by means of an electronic method or procedure that shall be effected by the use of Asymmetric Crypto System and has function which envelop and transform the initial electronic record into another electronic record.(www.nasscom.org)[19].

The IT Act, 2000 offers various perspectives legal infrastructure for e-commerce in India. It's main objective is to provide legal recognition for transactions carried out by means of Electronic Data Interchange and other means of Electronic Communication commonly referred to as e-commerce, that involves the use of alternatives to paper-based methods of communication and storage of information to facilitate electronic filing of documents with the Government agencies. (Sunil Kr. Gandhi, 2000)[4].

This Act provides for the appointment of a Controller of Certifying Authorities, adjudicating officers and one or more Cyber Regulations Appellate Tribunals. The Controller has quasi-judicial power to resolve conflicts of interests between the certifying authorities and the subscribers. The Adjudicating Officer has the powers of a Civil Court. The Cyber Appellate Tribunal is the body concerned with appeals to orders made by the Controller or Adjudicating Officer (www.cbi.umn.edu)[20].

Electronic signatures in the Model law are well-equipped to cope with the rapidly changing technology. Accordingly, that where the law requires a signature of a person, that requirement is met in relation to a data message if a method is used to identify that person and to indicate that person's approval of the information contained in the data message, and that method is as reliable as was appropriate for the purpose for which the data message was generated or communicated, in the light of all the circumstances, including any relevant agreement. It should be understood that as long as an electronic signature meets the test of identification; authenticity, and reliability, it is a valid signature. However, the Indian law differs in this respect as the Information Technology Act, 2000 as it mandates certain technical standards that is, an Asymmetric Crypto System commonly known as public key encryption and hash function (C. M. Abhilash, 2002)[5]

The Indian IT Act, 2000 does not have any express provision regarding the validity or formation of online contracts. It has been hailed as a bold step in the right direction, but there are many more substantive areas that need to be addressed viz; Spamming Laws; Consumer Protection; Intellectual Property Rights; Negotiable Instruments; Data Protection Rights and Privacy Rights. Although, the Government of India is understood to have been taking adequate measures to address it. It has set up a 'working group on IT for the masses' in May 2000 to study and make recommendations on how to extend the benefits of IT to the masses and also to design a set of policy initiatives to be implemented by the Government in this direction (www.accc.gov.au)[21].

The IT Act, 2000 has also provided a legal framework for smooth conduct of e-commerce. It has tackled various legal issues associated with e-commerce such as viz., requirement of writing; requirement of a document; requirement of a signature, and requirement of legal recognition for electronic messages, records and documents to be admitted in evidence in a court of law.

The IT Act, 2000 has not addressed certain grey areas such as viz; protection for domain names; infringement of copyrights laws; jurisdiction aspect of electronic contracts viz., Jurisdiction of Courts and tax authorities; taxation of goods and services traded through e-commerce and stamp duty aspect of electronic contracts(Mr Pravin Anand,2005)[6].

1.3.2: An Electronic Commerce Transaction Act:

An Electronic Commerce Transaction Act is a means to provide legal recognition for transactions carried out by means of Electronic Data Interchange and other means of Electronic Communication, that is commonly referred as Electronic commerce, that involves the use of alternative to paper-based methods of communication and storage of information to facilitate electronic filing of documents with various Government agencies and further to amend the Indian Penal Code, the Indian Evidence Act, 1872, the Bankers' Books Evidence Act, 1891, and the Reserve Bank of India Act, 1934 and for matters connected therewith or incidental.

In E-Commerce Transaction Act, various principles have been mentioned considering it's need to conform to international standards and international model in order to be integrated with the global e-commerce framework.

The Key Salient Features of the e-Commerce Transactions Act includes viz., electronic contracts; liability of network service providers; electronic records and signatures, including provisions which deal with electronic secure records and signatures; the public key infrastructure, and the public sector's use of electronic records and signatures (Ibid).

1.3.3: A Brief Sketch of Initiatives of Government of India for the IT Sector:

ICT can improve efficiency and transparency in the working of the Central and State Governments.

An attempt has been made to list out varying initiatives already introduced by the State & Central Government of India as follows.

The State should try to make maximum use of ICT in Governance, to provide the best services to people. It should structure its e-Governance projects based on the National e- Governance Plan and based on suggestions given by the National Knowledge Commission considering locally relevant factors. It should take up ICT enabled programmes for efficient flow of information between people and the Government of India.

It should make use of all the media tools and emerging technologies to ensure proper communication between the Government and citizens. It should promote the use of websites, e-mails and other new communication facilities amongst Government and Semi-Government organizations. It should ensure that its websites are actively maintained and kept updated. All Government orders and Gazette Notifications should be available through websites, as and when they are notified and issued from time to time. Technology, Standards too are very important in integration of e-Governance services of various Government organizations.

Open standards like Unicode and Open Document Format and Open Architectures should be followed in e-Governance projects to avoid total dependence on select vendors. The use of free and Open Source Software in all Government funded ICT e-Governance projects to the maximum extent possible is highly desirable. The Government of India shall set up a knowledge management facility to maintain an inventory of all e Governance projects in the State and document experiences and best practices from different projects. This facility that would provide the intellectual and academic leadership required for e-Governance.

A hardware and software inventory of all departments shall be maintained. Possibility of sharing the expensive hardware and software among the departments shall be explored. A data inventory also should be setup for sharing of data between Government agencies and to avoid duplication of work. Data standards including data structures shall be created to ensure interoperability. Creation of standardized spatial data set should be a priority area. The Government of India shall ensure security and privacy of citizen data, while compiling citizen database.

It shall ensure that all e-Governance projects are accompanied by plans for re-engineering business processes and change management systems associated with it, as and when required. It shall adopt e-procurement and e-disposal to bring in efficiency and transparency in Government and public sector purchases and sales. All e-Governance projects enlisted in the inventory shall be reviewed periodically to ensure that it meet the policy, standardization and legal guidelines. Security and Quality Audit should be made mandatory in all major e-Governance projects. Digital signature should be introduced in all departmental computerization processes, so as to ensure authenticity and integrity of Electronic Data Interchange (www.gujaratindia.com)[22].

ICT and ITES have by now turned into major sectors of economic activity in India. These sectors have shown remarkable growth in India, both in terms of export revenue and employment generation in the year 2008. In almost every sector of socio-economic activity ranging from industrial production to education and public healthcare, ICT plays crucial role in optimizing the processes, thereby improving the quality and efficiency of human endeavours (Subhashit Basu and Richard Jones ,2005)[7]

1.3.4: Policies for Applications of ICTs:

Unlike telecommunication technology and services such as especially voice, IT and services data or valued-added, and voice over IP etc. over times have been developed in liberalized markets in most countries. ICTs are indeed evolutionary realize such a convergence as the advent of Internet enabling transmission of knowledge, data, images and even voice such as telecommunication worldwide on a real-time basis(Tim O'Sullivan, John Hartley, Danny Saunders & John Fiske ,1985)[8].

It is worth noting that ICT sector has evolved with different paths since 1990's in various aspects from technologies to policies. Technological evolution or convergence ranging from fiber-optical cables, satellites, broadband, IMT 2000, and Internet Protocol (IP) to Wipro indeed has led some countries to adopt technology-neutral policies and regulations especially under the General Agreement Trade and Services/World Trade Organisation(GATT/WTO) as well as to converge the relevant administrations.

Unlike telecommunication services required for operators' licences with various conditions, IT services such as data have been historically categorized as value-added services requiring no-regulation or simple registrations. Thus, when talking about the policies of converged ICTs, the concept and scope are rather different from those of telecommunications alone.

These different policies have lead to compare the speed of growth or access among fixed telecommunications, broadcasting, and IT (Brenda Kienan ,2000)[9]. These ICTs have double strengths not only of its own as growing sector with full of potentials in the Hardware and Software Industries, but also as a means to mainstay other sectors from Agricultural, Heavy to Bio-Chemical Industries. The converged ICTs can also bring more opportunities to SMEs (Small and Medium Enterprises), which is of significance for healthy economy in information society.

E-Commerce ventures might involve "purchasing; developing and designing products; managing production or manufacturing; marketing; sales; service; collaboration among businesses; distribution of products; research, dissemination of information; setting up commercial communities; educating; entertaining; and such many others depending upon creative entrepreneurship. Althogh,In case of Business-to-Customers (B2C), it is relatively less and slowly growing due to various factors such as lack of awareness; infrastructure, and security (Eun-Ju Kim ,1993)[10].

1.3.5: Scope & Development of ICT Legislations:

Some countries have begun to accommodate such voices or demands through revising the existing laws and or issuing new legislations or cyber-laws to deal with new issues on ICTs. The term or scope of cyber-laws is yet unclear in many countries Although, it can be interpreted at large in two ways. One is for the relevant legislations dealing with or regulating converged computer, telecommunications and multimedia or broadcasting in such cases as the Multimedia and Communications Act, and two is for those tackling the emerging cyber-crimes in such cases as the Information Technology Act in India and the Convention of Cyber-Crimes adopted by the Council of Europe(Ajmal Edappagath, 2004)[11].

Table Number 1:1: Scope and Development of ICT Legislations

Issues	Laws	National Actions	International Actions
Contracts	Electronic Transaction Act	Hong Kong/China Singapore Thailand	UNCITRAL: Model Law
Harmful WebSites or contents	Penal Law or Legislation Obscenity Law Communication Decency Act Obscene Publication Act Self-Regulation	Australia, China HK/China, India, Japan Malysia, New Zealand Philippines, Singapore etc Hong Kong/China USA UK EU	NA
Hacking & Virus	E-Commerce Act	Philippines	NA
Intellectual Property Rights (IPR)	CopyRight Law Patents Law Trade Marks Law IPR Law Green Paper on Counterfeiting & Piracy	Hong Kong/China S.Korea Singapore India EU	WIPO: Ratification
Data Protection & Privacy	Personal Data Law Privacy Law Directive Self-Regulation.	Hong Kong/China S.Korea EU(e.g.,D95/46/EC)2 USA	OECD: Guidelines on Trans-border Data Barriers & The Protection of Privacy
Security	Electronic Transactions Act Digital Signature Laws Standards IT Act	Hong Kong/China, Germany, Italy, Malaysia Singapore etc UK (e.g., BS7799) India	ITU: Recommendations ISO: Standards
Taxation	Internet Tax Freedom Act	USA	NA
Domain Names	NA	Adopt ICANN Practice in many nations.	ICANN
Protection	Extension of existing consumer protection Act	EU	NA
SPAM	Spam Bill (2003)	Australia, EU & USA	ITU: New initiative (2004)4
Beyond National jurisdiction	NA	NA	ITU & ISO Standards EU: Cyber-crime Treaty (2002)

Source : Ajmal Edappagath(2004)[11].

1.4: THE GROWTH OF IT SECTOR IN THE STATE OF GUJARAT:

The Information and Communication Technology (ICT) Sector in the State of Gujarat has been projected to receive investments up to US$3.7 Billion by the year 2011.The IT sector turnover should grew from US$ 60 Million of the year 2005 and expected to reach figure of to US$2.4 Billion in the year 2010-2011.Software Exports from the Gujarat State recorded a growth rate of 107. 3 per centage to reach US$134 Million in financial year 2006 -2007 as compared to that of financial year 2005-2006.Information Technology-Enabled services and IT Hardware Industry are the focus growth areas of Gujarat's IT industry (www.gujaratIndia.com)[23].

As per the NASSCOM Report 2005, size of Information Technology/Information Technology Enabled Services (IT/ITES) Industry in India was to the tune of US$ 36 Billion dollar while it employed about 1.3 Million people. By the year 2010, IT/ITES sector is set to grow to $ 60 Billion and would employ about 2.5 Million persons.

Gujarat is one of the most prosperous States in the India. With 4.93 per centage population of India. It contributes about 16 per centage of the India's Manufacturing GDP. It has excellent physical infrastructure and has made rapid strides in the field of IT and e-Governance. IT sector in Gujarat employs about 15,000 persons. However, Gujarat is yet to realize it's true potential in IT/ITES sector. (Government of Gujarat, Science and Technology Department, November, 2006)[24].

Information technology enabled services (ITeS), viz. Knowledge Process Outsourcing (KPOs) and Business Process Outsourcing (BPOs) are the fastest emerging sectors in the State of Gujarat. As on December 2008, there were over 70 KPO Companies and over 50 BPO Companies in the year 2007 operating in the Gujarat State with over 350 registered units, and 172 operational units in the Software Technology Park of India (STPI) located at Gandhinagar.The IT/ ITeS sector turnover was expected to grow from US$60.98 Million in the year 2005 to US$2439.02 Million in the year 2010-2011. The Information and Communication Technology (ICT) Sector is projected to witness investments of up to US$3658.54 Million by the year 2010(www.gujaratbusinessIndia.com)[25].

Global sourcing of technology related services was estimated to grow by about 30 per cent to reach figure of US$ 70 to 76 Billion in the year 2007. Increased emphasis on Innovation-led growth needs to be added to the secular trend in technology related spending, with IT-enablement and global delivery now being recognized as complementary means of effectively increasing productivity; reducing time-to-market, and thereby increasing the returns on innovation investment.

1.4.1: Expansion of IT Companies in the State of Gujarat:

The IT sector in Gujarat is poised to become a major employment generator in the fourth coming year from 2010 to 2015 years with many big IT companies exploring possibilities of expanding its operations in the Gujarat State. According to Industry experts of the IT Industry, the IT sector in the Gujarat State shall grow by about 100 per cent by the year 2015 which shall be much above the anticipated national average of 20 to 30 per cent. Though, Gujarat is a relatively small player in the total IT businesses of the India, it offers an attractive IT policy. It is attracting all nationally and internationally reputed IT players. To illustrate, TCS and Patni have already entered in the State Gujarat, and other major IT firms too are planning to establish its units. The State of Gujarat has all the favourable factors to make IT a frontline industry as it offers stable and reliable power, best of infrastructure, lower cost of commercial and residential real estate compared to other States of India(www.epwrf.res.in)[26].

1.4.2: Gujarat-The Emerging IT/ITES Hub:

The State Government of Gujarat is committed to promote Gujarat as an attractive IT/ITES destination in India. As per the NASSCOM study, Ahmedabad is well ahead compared to other cities of India such as Mumbai, Delhi, Pune and Bangalore in context of the low cost of real estate; low cost of human resources; uninterrupted power supply, and investment friendly policy initiatives that to development of IT related infrastructure (www.nasscom.org).

IT sector of Gujarat state is projected to receive investments of US$ 307 Billion by the year 2010.Software exports from the Gujarat State showed a growth rate of 107.3 per centage to reach US$ 134 Million in the year 2006-2007 as compared to the year 2004 to 2006.Exports for year 2007-2008 were US$ 86.12 Million.

Being a frontline State in the implementation of e-Governance policies and projects, Gujarat was adjudged the 'best e-Governed State' in India by the Computer Society of India (CS) in the year 2006.Gujarat has one of the highest tele-density in entire India and the longest network over 65,000 Kilometers. Ready-to-use State-of-the-art infrastructure, such as the Creative Info city Park at Gandhinagar and GNFC Info Tower, and Astron IT Park at Ahmedabad.15IT/ITeS/Electronics Special Economic Zones were to be set up in the Gujarat State by large corporate players such as Tata, DLF, Adani, and Raheja Group.

Gujarat International Finance Tech-city (GIFT), a 500-acre mega project for global financial services industry's was to come up at Gandhinagar(www.emergence.nu)[27].

The State Government of Gujarat has identified following urban centers/conglomerates for promotion of IT parks in Ahmedabad / Gandhinagar, Vadodara, Rajkot and Surat. It has already identified few of the strategically located land parcels in above-mentioned urban centers. Expression of Interest (Eol) from reputed IT infrastructure developers were to invited for development of IT Parks in at aforesaid locations.

1.4.2.1: Land Acquisitions in the State of Gujarat:

The State Government of Gujarat has taken following steps for the development of IT infrastructure. In addition to the allocation of Government land, the State Government of Gujarat has decided to facilitate purchase of private land in accordance to land acquisition Act for the development of IT Parks for which Gujarat Industrial Development Corporation (GIDC) was to act as the modal agency for land acquisition (www.mit.gov.in)[28].

1.4.2.2 : Enhancing Supply of Skilled Work Force:

1.4.2.2(i) :Government, Industries & Institutions Initiatives for Skill Development:

Government Institute and Industry is expected to take initiatives to provide training inputs for developments of Soft skills to the youth in the age group of 18-25 years studying in the Colleges/Universities of the State of Gujarat. This would be provided in a distance-learning mode through Satellite communication facilities available at Bhaskaracharya Institute for Space Application and Geoinformatics (BISAG). This institutional mechanism is also to be used for training manpower for availing the opportunities in the field of Knowledge process Outsourcing (KPO).

1.4.2.2 (ii) :Certifications with NASSCOM:

The State Government of Gujarat has decided to collaborate with NASSCOM for "Nasscom Assessment of Competence (NAC)". This industry initiative is aimed at positioning India's Tier 2 and 3 cities and townships as ITES-BPO employment hubs. It's basic objective is to define an assessment mechanism for individual to assess his/her training needs while making them aware of employment opportunities that would help in scaling up the right skills base amongst youth and job aspirants in Tier 2 and 3 cities of India apart from improving the IT industry interactions with various educational Institutions. BPO/KPO sector too would also have easy access to quality manpower at reasonable cost and time.

Other Policy Incentives that has been taken by Government of Gujarat State includes following viz., as follows.

Mega IT Projects; High-Tech Park.; Stamp Duty; Special Economic Zones (SEZ).; Electricity Duty Exemption from Power Cut, and Waiver of NOC from GPCB.; Simplification of Labour Laws; Floor Space Index (FSI).; Zoning Regulation(Ibid).

1.4.2.3: Promotion of Urban IT Infrastructure:

IT sector is manpower intensive and is capable of generating large number of employment opportunities. Urban Centers are pre- dominant source for such skilled manpower. In addition, urban centers generally possess required infrastructure to support IT sector. Gujarat is one of the most urbanized States of India having 37 percentages of population located in the urban area, and therefore, it is therefore logical to encourage setting up of IT infrastructure in the form of IT parks in the urban conglomerates of the Gujarat State. The State Government of Gujarat has also decided to undertake various activities to promote IT parks that includes identification of suitable Government land and reserved for IT industry / IT Parks; assistance to IT industry/infrastructure units in acquiring land under the Land Acquisition Act; advise for the Urban Development Authorities / Municipal Corporation for development of town planning schemes in a way that land parcels would become available for development and growth of IT Industry / IT parks in the State of Gujarat. The State Government of Gujarat shall also determined to facilitate grant of SEZ status to IT Industry / IT Parks subject to the provision of SEZ Act/rules(www.govtofindia.com)[29].

1.4.2.4: Enhancing Supply of Skilled Manpower:

The Government of Gujarat has recognized the fact that IT industry would not only need skilled work force but shall also require assured supply of skilled manpower. Therefore, it has been actively promoting and strengthening educational infrastructure in the State of Gujarat. It is committed to enhance quality of the talent pool in the IT sector. It is fully aware about the need for training of graduates for meeting manpower needs of ITES sector which would require expertise in different verticals like Back Office Processing; Medical Transcription; Financial & Accounting Processing; Insurance Claim Processing, and HR & Pay Roll Processing. It therefore also promotes those training institutions that provide specialized training in domain specific skills as required by ITES Companies.

It has decided to facilitate employment of skilled work force by IT industries. It has set up a certification mechanism, which would prescribe certain tests to ascertain candidates' skills in different areas to assess his/her suitability for employment in IT sector. Data bank of IT literate students shall maintained by Gujarat Informatics Ltd. in collaboration with Directorate of Employment & Training entitled for employment purposes..

It has already launched entitled www.talimrogar.org. Portal, this is an online Employment Exchange System. Large database of available manpower can be accessed through Internet(www.indianembassy.org)[30].

1.4.2.5: Promoting Knowledge Process Outsourcing (KPO) Based Industries in the State of Gujarat:

Traditionally people of the Gujarat State have been truly enterprising. They possess a natural penchant for trading, finance and accounting. Each year the largest chunk of graduates pass out from various educational institutions. Supplementing this with requisite IT knowledge, such as work force would become readily available for employment in KPO (www.accc.gov.au)[31].

1:5: INFORMATION TECHNOLOGY (IT) POLICY OF THE STATE OF GUJARAT:

A comprehensive IT Policy 2006 – 2011 was launched by the State Government of Gujarat with a vision to endeavor for rapid expansion and growth of knowledge based economy in the Gujarat State. It has envisaged to attract investments in the IT sector by promotion of urban based IT infrastructure, enhancement in employing supply of skilled manpower and promotion of IT and related industries to it (www.gujaratbusinessIndia.com)[32].

1.5.1: Incentives for IT Infrastructure Development in the State of Gujarat:

Special incentives too have been offered for mega IT projects, employing more than 1000 persons in the case of an IT unit and 1500 persons in the case of an ITeS unit. Other incentives includes for projects with an investment of US$12.20 Million and above. Financial assistance is to be given at 50 Per cent on Fixed Capital Investment in land, Buildings and infrastructure facilities to IT park developer up to a maximum of US$0.61 Million. Stamp duty exemption shall be on purchase of land for IT park developers. It shall facilitate grant of SEZ status to IT industry/ IT parks considering provisions of the SEZ. Additional Floor Space Index (FSI) is to be allowed for IT/ITES Parks in urban centers. Nomination of one escort officer is approved for each IT mega project including IT Parks. Various other Incentives for IT/ITeS units include exemption of IT/ITeS units from zoning regulations under the applicable Town Planning Schemes; stamp duty exemption of 50 Per cent for IT/ ITeS units in IT Parks. All new IT units are to be exempted from the payment of electricity duty for a period of five years and exemption from power cuts. The waiver of no objection certificate from Gujarat Pollution Control Board (GPCB)" for IT/ ITeS units engaged in provision and production of "IT services & IT Software".

It has decided to initiate simplification of labour laws; and permission have been granted for round the clock operations. It has assured for continuous support for enhancement and development of quality manpower in IT/ ITeS industry. It has created a IT Fund with a corpus fund of US$5.85 Million to provide financial support for development of IT, ITeS and IT Products industry (www.mit.govt.in)[33].

1.5.2 IT Policy – Key Highlights (2006-2011) of the State of Gujarat:

The IT policy in the State of Gujarat was introduced in the year 1990s to help improve processes by using computing devices such as communication systems associated electronics and software to provide better delivery systems to the citizens; for the Over all IT growth in the State of Gujarat; it aimed at to creating enormous new employment opportunities and, training and development facilitates skilled manpower in IT. It aimed to facilitate information outlets at the doorstep of common man. To facilitate people at large for having of access information related to education, technical and non-technical courses being offered by various institutions, admission procedures, admission list, results, health services, such as various medical expertise available at different hospitals, on line medical services. It shall provide information on transport service information like bus arrival and departure timings, reservation facilities. The Government of Gujarat State was to set up venture capital fund for development of IT services, IT software and IT products to seek support from national fund for IT venture development as proposed by National Task Force. (www.gujexim.com)[34]

Capital Subsidy has been decided at 25 Per cent for eligible new IT units on total eligible capital investment .Special incentives have been decided inform of capital subsidy to be offered to large units on graduated scale. Turnover incentive is to be given at 5 Per cent on eligible annual turnover with a ceiling of US$ 1.2 Million Incidence of Sales Tax on computer hardware and peripherals has been reduced Connectivity incentive where Government would offer subsidised leased line rental up to 500 km, to an extent of 50 per cent of the lease rentals (www.mit.govt.in)[35].

1.5.3: Promotion of Urban-based IT Infrastructure in the State of Gujarat:

Special incentives for mega-IT projects creating employment of more than, 1,000 persons in case of IT unit and 1,500 persons in case of an ITeS unit. Special incentives for projects with investment of US$ 12.2 Million and above. Financial assistance of fixed capital investment in land, buildings and infrastructure facilities to IT park developer up to a maximum of US$ 0.61 Million. (www.Governmentofbelize.gov.bz)[36].

1.5.4: Vibrant Gujarat IT Summit – 2009:

An attempt has been made to outline in brief various steps that have been taken for attracting and increasing in the directions of IT investment for the development of the IT infrastructure of the State of Gujarat.

20 Memorandum of Agreements worth Rs 46,457 Crores were signed with IT Infrastructure Developers and ICT Investors. These MoUs are expected to attract potential investment of Rs.15,000 Crores and shall generate employment opportunities for 3.3 lakh persons.

In addition, a large number of reputed educational institutions, IT Parks and Gujarat International Finance Tech-City (GIFT) are being set up at Gandhi agar - Ahmedabad knowledge corridor. To create a large number of employment opportunities for the skilled manpower of the Gujarat State. Similarly, GIDC is also setting up an IT SEZ Park for IT Mega Projects at Gandhinagar (www.vibrantgujrat.com)[37]

1.6: INTERNET USERS IN INDIA AND WORLD WIDE:

An attempt has been made to throw light and also to provide a brief sketch of Internet users in India and worldwide as follows.

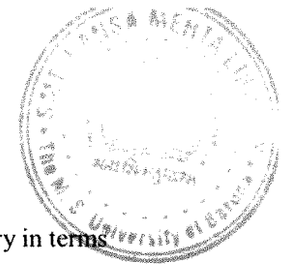
According to Internet World stats, there were 1,114,274,426 Internet users worldwide representing about 16.9 per cent of the world's population worldwide, as on 10th March 2007 showing an increase of 208.7 per cent compared to year 2000.

Table Number:1:2: Top 15 Countries Worldwide in terms of Number of Internet Users Ranked As on January 2007

Sr. No.	Country	Number of Internet Users (In Million)	Percentage Growth (Compared to January 2006)
01	US	153,447,000	+ 2
02	China	86,757,000	+20
03	Japan	53,670,000	+4
04	Germany	32,192,000	+3
05	UK	30,072,000	+1
06	South Korea	26,350,000	+8
07	France	24,560,000	+4
08	India	21,107,000	+33
09	Canada	20,392,000	+11
10	Iatly	18,106,000	+13
11	Brazil	14,964,000	+16
12	Spain	12,710,000	+4
13	Russia	12,707,000	+21
14	Netherlands	11,077,000	+3
15	Mexico	10,149,000	+18

Source: www.Internetworldstats.com/asia)[38].

From above table, it becomes envident that India, the Russian Federation and China saw heavy Internet user growth in the year 2006 that showed the growth rate of 33 per cent, 21 per cent and 20 per cent, respectively. China had the world's second-largest Internet population, with figure of 87 Million Internet users who were aged 15 years and older (www.etcnewmedia.com).



The Indian Internet population grew at 33 per cent, making it the fastest-growing country in terms of Internet users. India had over 21 Million Internet users who were aged over 15 years at the end of January 2007, as against figure of 16 Million of the year 2006. The number of people using the Internet worldwide grew by 10 per cent to reach figure of 747 Million at the end of January 2007. USA lead with an online population 153.4 Million followed by China with figure of 86.8 Million Internet users and figure were for Japan with 53.6 Million, Germany 32 Million, the UK 30 Million and India was ranked at the eight place. Internet users outside USA accounted for 80 per cent of the world's online population.

According to Internet World Status Report, there were 5,78,538,257 Internet users in Asia. As on March, 1998 which implied that it was only a 15.3 percent penetration compare to world's online population (www.Internetworldstats.com/asia).

According to Internet World Status Report, as on March 2008, there were 60,000,000 Internet users in India, reflecting penetration of 5.2 per cent penetration of Internet.

The following table gives data on the number of Internet users and population.

Table Number:1:3: Internet Users and Population Statistics For Asia

Asia Region	Population (2008 Est.)	Percent Population of World	Internet Users Status Data	Penetration Percentage per Population	Percentage Usage of World	Internet Use Growth (2000 to 2008) (Percentages
Asia Only	3,776,181,949	56.6	578,538,257	15.3	39.5	406.1
Rest of The World	2,899,938,339	43.4	885,094,104	30.5	60.5	258.8
World Total	6,676,120,288	100	1,463,632,361	21.9	100.0	305.5

Source:www.Internetworldstats.com/asia

Table Number:1:4: Internet Usage & Population Statistics of India

Year	Internet Users	Population	Percent Penetration
1998	1,400,000	1,094,870,677	0.1
1999	2,800,000	1,094,870,677	0.3
2000	5,500,000	1,094,870,677	0.5
2001	7,000,000	1,094,870,677	0.7
2002	16,500,000	1,094,870,677	1.6
2003	22,500,000	1,094,870,677	2.1
2004	39,200,000	1,094,870,677	3.6
2005	50,600,000	1,112,225,812	4.5
2006	40,000,000	1,112,225,812	3.6
2007	42,000,000	1,129,667,528	3.7
2008	60,000,000	1,147,995,898	5.2

Source:www.Internetworldstats.com/asia

An Internet has grown as very powerful tool with 70 per cent of Internet users using the Internet for sending as well as receiving e-mails. search, information and news were followed by chat sessions as well as instant messaging which emerged as part of few of the online activities that were undertaken by Internet users on Internet.

According to Computer Industry Almanac Inc., (CIA), an Internet consultancy, India was ranked fourth in the year 2005 after the USA, China, and Japan in terms of the absolute number of Internet users that showed total number of Internet users amongst four countries as viz; 198 Million, 120 Million, 86 Million, and 51 Million respectively. In most cases, CIA's figures were drawn from the International Telecommunications Union (ITU), which collects official data drawn largely from National Governments which is a data warehouse on Internet, It placed the figure of Internet users in India at 60 Million compared with 207 Million for the U.S., 123 Million for China, and 86 Million for Japan as on September 2006.

Internet usage in India continued to grow at a slow but steady pace, both in terms of its spread and depth. Overall Internet using population in urban India grew by 22 per cent during April 2005 to April 2006 to reach figure of 23.6 Million, then it grew by a healthier figure of 28 per cent during April 2006 to April 2007 to reach figure of 30.32 Million.

Table Number:1:5: Growth of Internet Users in Urban India

	YEAR 2007 (In Millions)	YEAR 2006 (In Millions)	YEAR Growth (In Percentages)
Total Internet Users amongst Urban households	12.75	11.20	14
Average Internet users Per Urban households	1.97	1.96	01
Internet users using Internet in Urban Individuals(Regular)	25.17	21.95	15
Internet using urban Individuals(Occasional)	5.15	1.65	212
Use of Internet by Urban Individuals	30.32	23.60	28

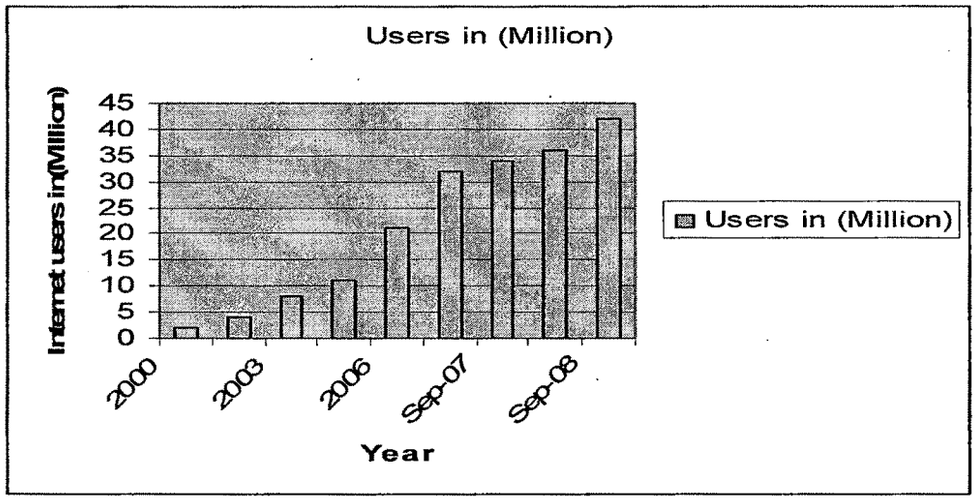
Source: Juxt Consultant, 2007.

The steady pace of growth in use of Internet since 2006 also indicated that the proportion of regular Internet users with over 2 years of Internet usage experience had remained constant at around 62 to 63 per cent. Of the total 30.32 Million urban Internet users, 25.17 Million (83 per cent) were the regular Internet users who logged on Internet at least once a month, and the balance 5.15 Million (17 per cent) were the occasional Internet users who used the Internet with a lesser frequency. 2 out of every 3 Indians used Internet daily (southasia.oneworld.net)[39].

According to the findings of Survey that was conducted in September 2008 by IAMAI in association with IMRB (Indian Management Research Bureau) revealed that India had 45.3 Million Active Internet users. Active Internet users were defined as those who have used the Internet at least once in the last one month. This is an internationally accepted benchmark for enumerating Internet users. Urban Internet users continued to dominate in case of use of Internet providing figure of contributing to 42 Million of the 45 Million odd users. The figure of active Internet user in urban India was 36 Million showing a year on year growth rate of less than 13 per cent.

It was also found that the number of claimed Internet users were 5.7 Crores compared with figure of 4.8 Crores of September 2007 which showed less than 10 per cent growth. Claimed Internet Users have been defended as those Internet users are those who have used the Internet sometimes but not in the last one month. The study revealed that there were five main barriers to Internet use in case of urban India. The main reason for lack of Internet use was found as lack of awareness about the use of Internet as the medium. The following figure provides figure on Internet users.

Figure Number:1:1: Internet Users (In Million)



Source: www.eetIndia.co.in[40]

According to the I-Cube 2008 jointly undertaken by IMRB International and IAMAI there were 3.3 Million active Internet users in rural India as on March 2008.With figure of 250 Million urban population in India, 82 per cent of Internet users were amongst literate and only 31per cent were English-speaking. However, out of 77 Million (38 per cent of 205 Million), 84 per cent were found as PC-literate.

It means that PC literacy and Internet usage were highly associated with English-speaking ability. As urban Internet penetration had reached a saturated level, there existed a need for innovative information delivery to ensure increase in time spent on the Internet (Ibid).

The proportion of population, literacy and Internet penetration of rural India was as follows in the year 2008.

Table Number: 1:6: Proportion of Population and Internet Penetration

Sr.No.	Particulars	Internet User (In Millions)
01	Total Population	818
02	Total Literate Population	573
03	Total Urban population	250
04	Total English Knowing Individuals	140
05	Total Computer Literate Individuals	87.1
06	Total Claimed Internet Users	55.5
07	Total Active Internet Users	31.3

Source: www.eetIndia.co.in

More than 50 per cent of Internet users in urban India were aged between 18 to 25 years that comprised of two categories viz; college going students and young men. Both these two categories together registered a growth of 3 per cent in compared the year 2007. All other categories seemed to have declined marginally. School going kids declined by 2 per cent; older men by 1, where as working women remained as constant the same as did non-working women compared to the figure of the year 2007.

The primary reasons for the increase in the youth category were twofold. First, Internet content and application are primarily geared to the youth, especially, the sticky applications like user generated contents viz; social networking, gaming and online entertainment; and a rise in Internet search for the academic purposes. Second, youths are found as increasingly adopting Internet not as a technology but as an another medium to indulge in their important wide-ranging daily activities such as listening to music; making friends; promoting themselves, and conducting business or exercising their occupation. Especially, online gaming emerged as a major growth area attracting investments amongst content developers and distributors (www.imrb.co.in)[41].

According to survey conducted by the JuxtConsult, the steady speed in growth of Internet usage since 2008 revealed that the proportion of regular Internet users with over 2 years of Internet usage experience had remained constant at around 62 to 63 per cent.

Of the total 30.32 Million urban Internet users, 25.17 Million (83 per cent) were the regular Internet users and the balance 5.15 Million (17 per cent) were the occasional Internet users.

Table Number: 1:7: Proportion of Population, Literacy and Internet Penetration

Sr.No.	Type of Activities	Internet Users (In Million)
01	Total Indian Population	818
02	Rural Literate Population	368
03	Rural Computer Literates	15.1
04	Rural Active Internet Users	3.3
05	Rural Population	568
06	Rural English-Speaking Population	63
07	Rural Claimed Internet Users	5.5

Source: www.iamai.co.in[42]

IAMAI in association with IMRB , also undertook primary survey in the year 2006 amongst 16,500 household covering 65,000 individuals across 26 major metros and small towns in India, with additional coverage of 10,000 business and 250 Cyber Cafe owners. It was found that there were 37 Million active Internet users in India with with figure of 23 Million as an active Internet users.

Ever user category was defined as someone who used Internet at least once and the active Internet users were the ones who accessed the Internet at least once in a month. The number of active Internet users had increased from 21.1 Million of March 2006 to 25 Million in September 2006. Internet in urban India was viewed as a funnel at the top most level was the universe of an urban population showing figure of 243 Million. It offered tremendous room for growth of Internet in India. However, Internet was felt as function of many other variables and chief amongst it was a basic level of familiarity with English to make meaningful use of the Internet and familiarity of using Personal Computer. In India, almost three fourth of all English speaking language population was found as PC literate but of these only 55 per cent had actually used Internet. It implies that there exists a potential for Internet converts amongst PC users. There were 38 Million Ever Internet users in India in September 2006, which included. 1 Million Ever Internet users from the rural India (www.iamai.in).

1.7: FEMALES AS AN INTERNET USER:

The number of women online Internet users in India crossed the figure of 12 Million mark but they continued to be substantially outnumbered by their male counterparts with figure of 26 Million as on December, 2007. Since 2004-2005, the percentage of online users in India has shown increase of about by 54 per cent to with figure of 38.5 Million.

Male online Internet users too increased in absolute numbers but clipped from 72 per cent of 2004-2005 to 68 per cent in the year 2005-2006.The number of Internet –savvy female online Internet users increased from 28 per cent of 2004-2005 to 32 per cent in the year 2005-2006.

In one of the study jointly conducted by the IAMAI and IMRB International, that covered around 65,000 individuals from 16,500 households surveyed in 26 different cities across the India. The figure of heavy Internet users in India was to 38 per cent in the year 2006, compared to figure of 16 per cent in the year 2001. In contrast, the number of 'light' Internet users had dropped from 63 per cent of the year 2001 to a 28 per cent in the year 2006(www.iamai.co.in).

Average time spent on Internet, in terms of minutes per week, shown an increase with the increasing age of Internet user, it showed that the older population spent more time on Internet as against the younger Internet users who are considered to be more net-savvy. While, the school going children spent an on average of 322.3 minutes a week on Internet, the college going students spent an on average of 433.2 minutes per week, and the older men spent an on average of 580.5 minutes a week. Working women spent 535.3 minutes per week while women non-working women spent an on average of 334.5 minutes per week on Internet. The study that covered around 65,000 individuals from 16,500 households surveyed in 26 different cities across the India(www.iamai.co.in).

1.8: INTERNET USAGE ACTIVITIES IN INDIA:

A brief review of IT Industry of India revealed that more than 70 per cent of Internet users used Internet for sending and receiving e-mails followed with information search, chat sessions, and instant messaging. It was found that the number of women Internet users who surfed the Internet crossed the figure of 12 Million mark in India in the year 2006. The estimated figures for the male-female ratio in India was closer to 60:40 ratios in the year 2007 in India. Though, the absolute numbers of male Internet users remained higher than women Internet users. With India's Internet population poised to reach figure of 100 Million during the year 2007-2008, the online male-female ratio was estimated to change to figure of 60:40 by the year2007-2008 from the prevalent ratio showed figure of 68:32 (www.iamai.co.in).

JuxtConsult conducted two large-scale primary surveys identified as offline and online during April-May 2007, based on figure of 14,200 Internet users. It provided that Internet usage in India continued to grow at a slow but steady pace. Internet Usership grew from figure of 28 per cent to reach figure of 30.32 Million. Online buying grew by 76 per cent in the year 2006. The online buyer base became 10.8 Million strong, representing a growth of 76 per cent showing base of 6.15 Million in the year 2007(www.juxtconsultant,.com)[43].

1.8.1: Internet Usage Patterns:

Online communication like e-mail and Chat are the two most common purposes behind accessing the Internet followed by Information Search. With the increase in the use of the Internet, e-Commerce applications such as online bill payment, online ticket booking have gained more popularity. Online entertainment is found as one of the key drivers for the growth of Internet in India with sticky applications like online gaming and Music/Video downloads and other such details are given in table as follows.

Table Number.1:8: Purpose of Internet Access:

Sr No.	Purpose of Access of Internet	Percentages of Access of Internet
01	e-mail	91
02	General Information Search	76
03	Educational Information Search	49
04	Text Chat	46
05	Online Gaming	41
06	Online Jobsites	37
07	Music/Video on the Internet	32
08	Financial Information Search	21
09	Book railway tickets on the Internet	21
10	Online Banking	20
11	Online News	13
12	Internet Telephony/Video Chat/Voice Chat	13

Source:www.iamai.co.in

Based on one of the study conducted by IAMAI and IMRB entitled "Online Banner Advertisement in India". It was found that the online banner advertisement market of India was estimated to grow at 40 per cent to reach figure of 3,350 Crores in the year 2008-2009 from its previous figure of 2,350 Crores of the year 2007-2008.Auto, FMCG, Consumer durables and Education are some of the factual leading sectoral advertisers in the online banner space.

Following tables provides data on online advertisements and Online Shopping after watching of online advertisements.

Table Number:1:9: Searched to See the Advertisements

Sr.No.	Selected Criteria	Percentages
01	Job Sites	41
02	Education/Training related websites	35
03	Investment options like Mutual Funds	27
04	Mobile Phone/Instruments	24
05	Personal Products	22
06	Entertainment websites	22
07	Loans by Banks/Financial	21
08	Insurance Ads	21
09	Air Tickets Ads	17
10	Matrimonial Advertisements	17

Source:(www.imrb.co.in)[44].

Table Number:1:10: Products Purchased After Seeing the Advertisements

Sr.No.	Selected Criteria	Percentages
01	Job Sites	4.3
02	Education/Training related websites	3.8
03	Investment options like Mutual Funds	1.4
04	Mobile Phone/Instruments	1.2
05	Personal Products	1.0
06	Entertainment websites	1.0
07	Loans by Banks/Financial	0.8
08	Insurance Ads	0.8
09	Air Tickets Ads	0.7
10	Matrimonial Advertisements	0.7

Source :(www.imrb.co.in).

1.9:A BRIEF REVIEW OF LITERATURE ON ONLINE SHOPPING IN INDIA & WORLDWIDE:

One of the opportunities that the growth of the Internet has provided is the ability for Internet users to browse commercial products shown on Internet, and in some cases to place an online order using a personal computer. There are many drivers for online shopping in India, such as access to information and communication; rising PC penetration; and the proliferation of cybercafés showing figure of more than 1, 26,000 in India. (www.phyorg.com)[45].

Despite an increasing number of online shoppers and offering of wide range of products on Internet, one finds paucity of research work undertaken with a focus on demographic variables especially gender as well as the attitudes, perceptions and profiling of online shoppers in India. The results of the AC Nielsen online Consumer Opinion Survey demonstrated that approximately 10 per cent of the world's population which showed figure of more than 627 Million people shopped online at least once. Europe and North America showed highest number of online shoppers, with Germany, Austria and the UK that topped the list, with at least 95 per cent of online shoppers. In Asia pacific region, South korea and Taiwan were ranked as highest, with figure of at least 90 per cent of online shoppers.

1.9.1 Growth of Online Shopping World Wide:

A survey was conducted based on 21,100 respondents in 38 markets amongst Europe, Asia-Pacific, North America, Latin America and South Africa, which clearly showed an upward trend towards global online shopping.

The survey focused on online shopping experiences of Internet users around the world, selected respondents comprised of online shoppers were asked about when they last did an online purchase, what were the items, last purchased, the modes of payment, which payment card was used most and the most preferred payment mode used for online shopping. Across the globe, over 212 Million online shoppers stated that books as among the last 3 items they purchased online, Over 135 Million people purchased DVDs and /or Video Games. Nearly 135 Million used Internet for making Air Reservations. Over 128 Million purchased Clothes; Accessories; Shoes and over 112 Million paid for downloading Music and CDs.Over 106 Million purchased Electronic Devices. Close to figure of 98 Million bought Computer Hardware and over 86 Million used Internet for making hotel and/or tour bookings. Online retail sales are expected to grow from the figure of $81 Billion of the year 2005 to $144 Billion in the year 2010(Sita Mishra, 2007)[12].

The B2C and/ or C2C e-Commerce market can be defined as buying and selling of products & services using the Internet or any other electronic application that depends on the Internet. It comprises transactions for which Internet can act as a medium for contracting or making payment or for consuming the service and product by an end consumer.

1.9.2 B2B & C2C e- Commerce Industry of India:

To outline in brief the B2C and C2C E-Commerce Industry, which is further divided into the varying areas as follows. Online Travel comprises of Travel Aggregators; Tour Operators, Hotels and Railways. E-tailing consists of Online Retailers and Online Auctions; Classified and Online Jobs whereas Online Matrimony; Online Property; Online Automobile and General Classified; where as Paid Content Subscription comprises of research, articles and exclusive videos

According to IAMAI, the total value of e-Commerce activities within India crossed figure of Rs. 7,080 Crores during the year 2006 - 2007 with projected figure of Rs 9,210 Crores in the year 2007-2008, showing a growth of about 30 per cent in the year 2008 compared to year 2007 (www.iamai.in/final_ecommerce)[46].

Table Number: 1:11: E-Commerce Market Size of India

B2C: e-Commerce	2006-2007 (Rs. in Crores)	2007-2008 (Rs. in Crores)
Online Travel Industry	5500	7000
E-Tailing	850	1105
Online Classifieds	540	820
Online Subscription	20	30
Digital downloads	170	255
Total (Rs. Crores)	**7,080**	**9,210**

Source: www.iamai.co.in

The overwhelming response of the Internet users-cum-online shoppers in India towards online travel segment is triggered by the entry of low cost carriers. This industry has seen an upsurge in the travel aggregators and tour operators, thereby bringing affordable travel at doorsteps of Indian travelers. It has witnessed an increase in the number of travelers as well as number of travels per traveler. However, the biggest issue facing online travel industry is limited penetration of credit cards, coupled with consumers' apprehensions in using their credit cards for online reservations and making payments using it.

Moving on to other online segments that have been clubbed into Online Non-Travel Industry, such segments are relatively smaller compared to online Travel industry as it caters to the niche segments and faces with a specific set of triggers and barriers.

E-Retailing:

To illustrate, e-Retailing Industry stood at Rs. 850 Crores in the year 2006-2007 and contributed maximum to the Online Non-Travel Industry. It was expected to reach figure Rs 1,105 Crores at the end of the year 2007-2008. Owing to elimination of physical costs, the category offers the best deals for low-end as well as high-end products. However, many customers complain about the untimely delivery of products ordered online.

Online Classifieds:

Online Classifieds is the second largest contributor to Online Non-Travel industry. Its size was around Rs. 540 Crores at the end of the year 2006-2007 and that was to reach figure of estimated Rs. 820 Crores in the year 2007-2008. Since, this segment is consumer-driven, it provides the Internet users flexibility to access large database at the lower costs. Though, there is no dearth of free data available online, sale of information online is becoming a success.

More and more players are entering the market to sell exclusives videos, research data and reports, etc.

The size of Online Subscription market was expected to grow by 50 per cent from the figure of Rs. 20 Crores of the year 2006-2007 to Rs. 30 Crores at end of the year 2007-2008(www.iamai.in/).

M-Commerce:

Along with the PC-based Internet Access, the mobile-based Internet Access too is expected to drive the growth of B2C and C2C E-Commerce industry in India. With an increase in the mobile phone subscribers, there has been a rise in digital downloads in to the mobile phones.

With the surge in mobile penetration and usage of GRPS-enabled mobile handsets, the size of digital downloads market was expected to reach figure of Rs. 170 Crores in the year 2006-2007 to Rs. 255 Crores at end of the year 2007-2008. Thus, with continuous efforts towards making online payment systems safer and rise in online shoppers from smaller cities owning to increasing Internet and mobile phone penetration, the growth of B2C E-Commerce industry is inevitable in the India. The next phase of growth would be marked by localized product offerings and making content available in various Indian languages (www.iamai.in/final_ecommerce).

1.9.3 A Brief Review on e-Marketplace & Traditional Marketplace:

Internet-based Business-to-Business electronic Markets represent an Interorganizational Information System that facilitates e- interactions among multiple buyers and sellers. At a basic level, e- markets can be viewed as (IT)-facilitated markets. In e- markets, buyers and sellers come together in a market space and exchange information related to price, product specifications, and various other terms of the trade as well as in dynamic price-making mechanism that would facilitate transactions amongst the firms. E-markets are becoming viable alternatives to traditional markets and hierarchies, and the commercial potential of e-commerce is immense, and across the globe Business-to-Business e- markets are the fastest growing e-commerce phenomenon (Rajdeep grewal and others, 2008)[13].

Although, an e-marketplace plays the same role as a traditional marketplace, it has a few important features that distinguish it from a traditional marketplace that has been outlined in brief as follows.

First, an e-marketplace can eliminate spatial restrictions. It can enable geographically dispersed buyers and sellers to trade with each other as if they were at the same location. Second, an e-market place facilitates trading by reducing operating costs such as the buyer's search costs and the seller's menu costs. Third an e-marketplace can serve as an information agent that provides buyers and sellers required information on products, services and other participants in the market. (Porter, L. V., & Sallot, L. M,2003)[14].

Moreover, online shopping is now prevalent in even the Tier-II and III cities of India, The growth of the overall Internet user base and quality of Internet access like broadband and above all the security and legal infrastructure are issues that if not addressed could stall the growth of e-commerce in the India (www.physorg.com)[47] .

The online shopper base has reached a strong figure of 10.8 Million showing growth of 76 per cent in the year 2006. Online travel bookings overshadows online shopping of all other various products put together. Networking and Entertainment activities have emerged as were the biggest gainers whereas other popular online activities are viz., communication, matrimonial search and dating and friendship activities. The following table provides data on the growth of online shopping activities of India in the year 2006 **(Please Refer Table Number 03).**

Table Number: 1:12: Top 10 Online Shopping Activities in India Other than Travel Tickets)

Sr. No.	Website	2007 (In Percentages)	2006 (In Percentages)
01	Ebay	34	-4
02	Rediff	25	-4
03	Google	8	5
04	Yahoo	7	-0.5
05	Indiatimes	7	-4
06	Futurebazar	6	6
07	Shopping	2	0.6
08	Sify	2	0.4
09	Indiaplaza	1	-0.1
10	Online shopping	1	0.6

Source:(www.juxtconsultant.com)[48]

1.9.4.A Brief about Online Retailing in India:

Constructive uses of new technologies have always contributed positively towards improving human life standards and the Indian economy. The widespread development of basic infrastructure has been brought about by new technologies, coupled with the policies of Liberalization, Privatization and Globalization in the early 1990s that has hastened growth and led to the Indian consumer becoming more and more aware as well as concerned about standards of life. It has been backed up by competition in the market and increased income and purchasing power of the consumers.

According to study conducted by the National Council of Applied Economic Research (NCAER), the Indian middle class, which has been defined as those household families having annual income of Rs 2 lakh to 10 lakh, has been expected to reach figure of 153 million by the year 2009-2010 from the figure of 57 Million of the year 2001-2002.

Among the various sectors contributing to the changing life standards of consumers in India, an important one on is the Retail Sector of India. The Economic Times Intelligence group (ETIG) estimated that the size of the organized retail industry was at Rs 16,000 Crores in 2001-2002 and estimated that it would cross the benchmark of sales of Rs 37,000 Crores in the year 2007.The industry is growing at the rate of 18 to 20 per cent per annum. However, while the opportunities that exists in the retail arenas are vast, and exploiting these opportunities is very challenging(Ibid).

An important application of the Internet that also unifies the market virtually is online shopping. Specifically, online shopping has brought the retail space into the home(www.juxtconsultant.com).

However, India has a very low Internet penetration compared to other countries of Asia. Despite the poor penetration of Internet in India, the traditional Indian retailer has started migrating online for providing Anywhere, Anytime Shopping facilities and Internet retailers have begun to globalize its business by attracting local and global consumers through competitive offers. The success of its online ventures such as bazee.com, rediff.com and Indiatimes.com indicates a positive future for the Internet and its related technologies.

With the development of the requisite infrastructure and increasing awareness of online shopping in India, developing a positive mindset towards Online Shopping. on the part of Indian consumers have become crucial. The momentum and growth of the Indian Retail Industry is expected to give a further boost to the online shopping industry. Behavioural Research is aimed at exploring consumers' shopping orientations, as well as identifying actual, and potential online shoppers, it's behavioural facets, expectations and experience with retail vis-a vis online shopping.

A popular approach for studying the phenomenon of online shopping has been the adoption of Intention based theories including the theory of reasoned action; the theory of Planned behaviour nd the technology acceptance model.

These theories model an individual's intent to engage in a behaviour as a function of his or her salient beliefs and attitudes towards the behaviour of interest. Various Studies that have been applied and tested these theories have offered valuable guidelines to Online Retailers help them to better focus on those aspects of online shopping that are important to customers like ease of use and make improvements in areas which are found to be lacking like security. However, for purpose of market segmentation, it is essential to explore the external variables whose influence in intentions and behaviour has been theorized to be fully mediated by beliefs and attitudes. These external variables could include demographic; personality and psychographic characteristics that could help Internet marketers to segment their market for customized advertisement, promotion, service and retention campaigns (Darshna Parikh, 2006)[15].

1.9.5 The Scenario of Online Shopping In India:

ACNielsen conducted a study polled over 21,100 respondents in 38 markets from Europe, Asia Pacific, North America, Latin America and South Africa.

The study showed that India's online population may be a small proportion of its population but it represented a set of consumers that offer marketers a winning combination, greater affluence and the willingness to adopt technology faster.Already, leading brands including Nike; Reebok; Samsung; LG; Motorola; Onida; Kodak; Nokia; Titan; Tanishq; Casio; Arrow; Lee; Wranglers; Allen Solly and Raymond have a full-fledged online presence.

A study conducted by ACNielsien revealed that more and more Indians are doing online shopping and the frequency of the India's online shopping supercedes the global average. Though, India's online population may be a small proportion of its population but it represents a set of consumers that offer marketers an attractive combination, greater influence and the willingness to adopt technology faster. Online Shopping in India relies upon several drivers such as access to information and communication; proliferation of cyber cafes, and above all attitudes of Indians towards variety and ease, which is only possible through online shopping.

According to study undertaken by Just Consultant in India, Online Shopping is poised for greater acceleration as more and more manufacturers and marketers use the hybrid concept by integrating the Internet into their sales model. The Indian online market is yet to take-off in a considerable way and is far behind the global trend. Internet is used more for searching than shopping products and services. Though, a significant proportion of Internet users are also Internet consumers, only a few of them are driving the online shopping momentum.

A study conducted by IAMAI, an increase of 54 per cent Internet user base from 25 Million users in the year 2004-2005 to 38.5 Million users in the year 2007. Around 12.32 Million registered online women users were found in India during the year 2005-2006, showing of 4 per cent against when compared with figure of 11.85 Million of the year 2004-2005. It showed that in India the number of women browsers had increased while the number of men browsers had declined by 4 per cent showing figure of 26.18 Million.

Moreover, online shopping was found as prevalent in nearly 2,000 towns and cities of India including tier-II cities viz., Surat; Ankleshwar; Solapur; Kottayam; Fridabad, and Bhopal. Maharashtra topped the list with kerala yet to pick up.Keeping in mind the growing online markets of the India, online big players had prepared themselves to grab the opportunity. E-Bay was found as the most popular online auctioning and selling website that has merged with bazze.com to start its Indian E-operation Products, which are sold that includes Books; Electronic Gadgets, Air and Rail Tickets; Apparels; Gifts; Computer Peripherals; audio and video CDs; and DVDs; Magazines; Sport Goods; Movie Tickets; Jewellery and Toys; According to third Annual Global e-Commerce Report of Taylor Nelson Sofres (TNS) Interactive, the most popular product purchased online purchase in India was clothes (46 per cent); Music\CDs (29 per cent) and Books (26 per cent).

In India, many consumers are not using electronic buying system and it seems that online shopping is not keeping up with the global trends of e- marketing. The cautious Indian customer obviously has many doubts, apprehensions, and under fear while at the time of the Internet while availing services for accessing company's website with the purpose of online shopping. As a result, many online shopping websites are now offering Cash-on Delivery to as certain its target customers. Secure Payment Gateways and SSL (Secure Socket Layers, a protocol for transmitting private documents via the Internet) have also become the commonly accepted norms among e-Commerce companies to provide better security to its customers, using credit cards. Despite an increasing number of online shoppers and products that are being offered on the websites, there exists relatively little research work that has focused on demographic and psychographic variables on the attitudes of online shopping in India (Ibid).

A 'survey' was conducted by Juxt Consultant to estimate and profile the Internet users in March 2008 based on sample size of over 12,500 households in 40 cities of all population sizes, and over 4,000 households in 160 villages across the India, covering most of the socio-economic stratas. The Internet usage dynamics, behaviour and website preferences were captured through a large scale online survey with over 15,000 Internet users in April 2008.The major findings revealed in this Survey found out following on online activities of Internet users were as follows..

Table Number: 1:13: Online Activities of Internet Users At a Glance

Sr.No.	Online Activities	Top Website	Percent Used Most
1	Emailing	Yahoo	51
2	Instant Messaging	Yahoo	53
3	Job search	Naukri	42
4	Online News	Yahoo	16
5	Information Search-English	Google	81
6	Information Search-Local Language	Google	65
7	Online Travel	Yatra	18
8	Games	Zapak	32
9	Online shopping(non-travel)	Ebay	33
11	Real Estate	Google	23
12	Financial News/Information	Money control	18
13	Online Share Trading	ICICI Direct	31
14	Net Telephony	Yahoo	25
15	Matrimony	Bharat Matrimony	36

Source:www.juxtconsultant.com

1.10: A BRIEF REVIEW OF LITERATURE ON INTERNET USAGE ACTIVITIES:

An attempt has been made to put forward findings of the few of the research studies on the Internet users as follows.

James Katz and Philip Aspden(1997) undertook a national random telephone survey, on the motivations for and barriers to Internet usage. In total, 85 percent of respondents reported having heard of the Internet. Internet users were found as generally wealthier and highly educated. Social and work networks appeared to be important for stimulating interest in Internet and for providing Internet users required support. As to reasons for using the Internet, socio-personal development appeared to be the key driver, while non-users had a decidedly different set of beliefs about the Internet's value. As to the barriers of Internet, even experienced Internet users found it difficult to get started, which confirmed other studies of this topic. Barriers included cost and difficulties in understanding how to use the Internet. It concluded that people strongly desired an easy-to-use Internet (James Katz and Philip Aspden,1997)[16].

Thompson S.H. Teo(1998) examined the differential effects of occupation on Internet usage in Singapore. The primary data were collected on Internet users' use of Internet with the help of using via a questionnaire that was placed on the Website. Although, there has been much publicity about Internet, empirical research focusing on it is still relatively sparse. Most research studies on Internet have been carried out in Europe or USA in comparison to Asia.

From three main occupational groups viz; students; Non-IT Personnel and IT personnel, and total number of 1,299 usable responses were obtained. Differential effects of occupation in terms of Internet usage patterns, tasks preferences and factors affecting an enjoyable Internet experience were examined. The findings showed that online shopping requires more IT skills and resources such as personal computer ownership and accessibility (Thompson S.H. Teo,1998)[17].

Jessica Lichy(2000) identified the broad factors that had influenced the use of Internet in France and the UK with the help of a survey that was undertaken to assess the factors that had shaped. In use of Internet and continue to shape, Internet use in a cross-cultural setting; in particular Government intervention, business pressure and socio-cultural developments such as the evolution of popular culture. The study highlighted emerging trends concerning the growing popularity of online communication; accelerating socio-linguistic change, and prompted discussion in France about how to limit English jargon being absorbed into the French language. It's results online and offline revealed a degree of similarity between France and the UK in attitudes and behaviour of Internet users, and cultural differences amongst themselves in risk-taking and willingness to change. It's results demonstrated that the most frequent users of online purchasing websites were aged between 30 to 49 years for Manchester respondents and 20 to 29 years for Lyon respondents which confirmed the notion that both countries have adopted Internet for different Internet activities and were in different phases of this adoption process. It was concluded that there was an urgent need for a country-wide information campaign to educate and inform Internet users about how to get the full benefit of Internet technology (Jessica Lichy, 2000)[18].

Alexander Mentrup, Simon Robinson and Karsten Gareis(2007) examined impact of Internet usage behaviour and online application methods, when they investigated the specific challenges created by new online services and delivery methods with regard to the protection of consumers interests. By means of a survey of a representative sample of online consumers in five EU countries, they found that a high degree of interest in young online and mobile products and services including online pay-media; downloads of pay-software; location-based online services and online pharmacies. The results also provided an evidence that the degree to which consumer concerns were taken seriously by providers and regulators were likely to exert a strong influence on people's willingness to purchase novel products and make use of novel online distribution channels(Alexander Mentrup, Simon Robinson, Karsten Gareis,2007)[19].

P J du Plessis, P G Mostert and E J North(2004) focused on the experience of the Internet user with regard to purchase of goods and services. In self-administered survey, using questionnaire that was uploaded on website, the primary data were collected from 1,005 responses.

It was found that the period of Internet usage significantly influenced the decision to buy online using the Internet and the period of Internet usage significantly influenced whether those shopped on the Internet searched for, or considered to search for, product and service information online prior to purchasing from non-Internet-based sellers (P J du Plessis, P G Mostert and E J North,2004)[20].

Wal J. Taylor, Grant X. Zhu, John Dekkers and Stewart Marshall(2003) conducted a survey in Central Queensland, Australia aimed to examine differences in home Internet usage patterns between young and old; male and female; people in urban and rural areas; married and unmarried; well-educated and less educated; rich and poor, and employed and unemployed and found significant differences amongst them. Its results highlighted areas for further research and also provided a basis for Government agencies and industries to consider such associations in future in policy formulation for regional development using ICT. It suggested that further research should be conducted to monitor consumer behaviours of the youngest age group in Internet use for entertainment and information search in order to detect possible Internet overuse or addiction. In addition, further research should be conducted to find out what people search for on the Internet, and also search for employment opportunities, financial incentives were suggested for the unemployed people (Wal J. Taylor, Grant X. Zhu, John Dekkers and Stewart Marshall,2003)[21].

1.11: A BRIEF REVIEW OF LITERATURE ON FEMALES' INTERNET USAGE ACTIVITIES:

There have been numerous studies done on the differences in the amount of time spent using the Internet by males and females. Researches have suggested that both men and women use the Internet for different purposes, and with different intensity.

An attempt has been made to throw light on Internet usage activities of both men and women in use of Internet in India and World wide as follows.

Some research studies have suggested that there exist a gender gap whereas few of the research studies have suggested against it. Some research studies have suggested that women use Internet for a set of particular uses, while few other studies have indicated completely different uses of Internet.

A global study conducted by Taylor Nelson Sofres revealed that the number of Indians using the Internet to access Government services or products online had increased 09 to 31 per cent in the year 2002 against 22 per cent of the year 2001. Based on the data of over 29,000 regular Internet users across 31 countries, the study reported that more women logged onto the Internet to interact with the Government than men.

The proportion of women using the Government online services had increased by 10 per cent in the year 2002 compared to 7 per cent of males. It also concluded that the perception of safety about using online Government services had improved in the year 2002 (TheEconomic Times, 9th November 2003)[21].

Weiser (2000) surveyed 506 college students and found that women used the Internet mainly for obtaining course information, chatting online, educational assistance, and e-mail. Men reported greater use of Internet than females did for Online Shopping, listening to audio broadcasts, building world wide web pages, searching for romance, searching for hard-to-find items, pursuing sexual relationships, staying informed with the news, viewing pornography, and participating in online games. According to Weiser the gender gap appeared to be diminishing as gender differences were actually differences in age and experience as an Internet user (Weiser, 2000)[22].

Sherman (2000) conducted a study of undergraduate college students to study the gender differences in use of Internet. Younger respondents reported high levels of participation in four of five Internet activities, viz., e-Mail; World Wide Web; Usenet, and chat groups; as measured by frequency and hours of use. Furthermore, men and women held different attitudes about their personal experiences with computers, and the difference was not significantly less among younger age groups. With the exception of e-mail, men used the technology more often and had more positive attitudes about their experiences than women .Once again, while studying undergraduate students to know how significant was age difference between the younger respondents and the older respondents? It should be reiterated that the two above studies were conducted among college students, know that the researchers could find little variance in the undergraduate age group. It is difficult to generalize the above findings to the general population when the age range is so limited (Sherman ,2000)[23].

According to Bimber (2000), two statistically significant gaps existed on the use of Internet viz., in access and use. The access gap was not the product of gender-specific factors, but it was explained by socio-economic differences between males and females. The use gap was the result of both socioeconomic and gender-specific phenomena. Females were found as catching up in use of Internet. According to Bimber, because socioeconomic differences were lessening. But, women's intensity of use remained less than men's. Not only there were gender differences in intensity, but there were also differences in how males and females used Internet. Bimber conducted three random digit dial telephone surveys with each of the three returning a little over one thousand responses. Age was not a parameter of this study. Bimber's research was interesting although, it appeared that in this frequency equated to intensity. Frequent use of Internet was defined as its daily use.

According to this study more men were going online everyday and men used the Internet with greater intensity. The research Studies have shown that womens' motives for using the Internet were different than the men (Bimber ,2000)[24].

The Pew Research Center conducted a survey, which showed that 60 per cent of women and only 51 per cent of men stated that e-mail exchanges improved their connections to family members. 71 percent of women reported that email had improved their connections with friends, while only 56 per cent of men stated that it improved connections. Women (56 per cent) mentioned that they missed e-mail a lot if they could no longer use it. Only 43 per cent of men missed e-mail a lot if they could no longer use it. This research indicated that on the Internet, women were more likely to seek health information; religious information; new jobs, and play games online. Men were more likely to get news; shop; seek financial information; did online trading, bid in online auctions; accessed Government web sites; and also searched for sports news (The Pew Internet, 2000)[25].

Alreck and Settle (2002) conducted a survey to determine that whether men liked online shopping more than womenor not?. Another study suggested that men shopped more online than women. In fact, online shopping was the only area where women were less positive about online shopping than men. Some respondents thought that Internet was primarily a man thing, while others identified conditions as time pressures, greater exposure to computers on the job to encourage online shopping. One would expect the image of online shopping to improve among women as they gained greater access and familiarity with the Internet, but this research indicated that the point where women found it as easy, informative and relaxing ones as browsing compared to catalogue which is time consuming(Alreck and Settle ,2002)[26].

Shaw and Gant (2002) studied the gender gap of Internet use of undergraduate students who were put into chat groups that met via the Internet and asked conversational questions to stimulate a chat. Participants were given regular questionnaires to track depression, loneliness, self-esteem, and social support. The research showed that women were more likely to be motivated to use the Internet for interpersonal communication, but that both genders were benefited from the perceived social support, and self-esteem they received from their chats. In addition, both genders had felt lower loneliness and depression scores after their chats. Their findings appeared to reinforce the widespread assumption that men prefered to use the Internet for information gathering and entertainment and women preferred to use the Internet for communication (Shaw and Gant ,2002)[27].

Rosen, L. D., & Weil, M. M. (1994) concluded that although the gender differences appeared to be stabilizing, women continued to trail in the number of uses, as well as frequency and intensity It was studied by looking at Internet use at home, Internet use anywhere, number of Internet uses, and frequency of Internet use (Rosen, L. D., & Weil, M. M.,1994)[28].

Porter and Sallot (2003) looked into professional Internet use. Using a nationwide survey of public relations practitioners, 432 people responded to the e-mail survey which studied practitioners' relationship with the Internet and whether gender influenced Internet use. According to Porter and Sallot, women had now caught up with men in their use of the web for professional roles. But men, were using the web more for issues communication. (Porter and Sallot ,2003)[29].

Bernoff(2004)conducted a study on gender and Internet usage amongst men and women used the Internet differently. But, something they had in common was multitasking. Once thought of as a more feminine trait Forrester Research reported that a majority of web, print media, television, and radio consumers are multitasking. Multitasking while consuming media was about equal among men and women and decreased with age, and increased with income. Since, there have been large increases in the amount of media consumed it only makes sense that multiple sources of media were consumed at the same time. Not only was a consumer using the Internet more. Consumers were becoming more fully engaged with the Internet (Bernoff, 2004)[30].

Buchwalter(2005) conducted a study and found that when consumers were asked to choose only one type of media to take with them to a deserted island a majority, 64 per centage, choose a computer with Internet access (Buchwalter, 2005)[31].

Rosie Heimrath and Anne Goulding (2001) examined findings of a research study undertaken in the year 1999 aimed to identify and analyze the differences in use, by gender, of the Internet.

The study involved students at Loughborough University and members of the public at libraries in Loughborough and Slough which showed that female use, interest and confidence in using the Internet was high but, in comparison with male respondents the females had not taken use of Internet as rapidly(Rosie Heimrath and Anne Goulding ,2001)[32].

Boyd, T. C. and Mason, C. H(1999) examined the Internet usage behaviour by males and females. Instant messaging was found as equally used by both males and females, though female users of the instant messenger reported chatting longer, more frequently, and more for reasons of sociality than for entertainment or information (Boyd, T. C. and Mason, C. H,1999)[33].

Linda A. Jackson, Kelly S. Ervin, Philip D. Gardner and Neal Schmitt (2001) examined gender differences in use of Internet and factors responsible for these differences. A sample of 630 Anglo American undergraduates who completed the Student Computer and Internet Survey that contained questions about e-mail and use of Internet, and about potential affective and cognitive mediators of Internet use found that females used e-mail more than did males, males used the Internet more than did females, and females reported more computer anxiety, less computer self-efficacy, and less favourable and less stereotypic computer attitudes (Linda A. Jackson, Kelly S. Ervin, Philip D. Gardner and Neal Schmitt,2001)[34].

Ananda Mitra (2000)examined three questions related to the evaluative criteria used by men and women to make judgments about Web pages. What were the major criteria used by students in evaluation of Websites. Using a survey design with college students, results of this research study indicated that students tend to use Websites that were clearly understandable, and were relevant to their special interests and needs. Furthermore, significant gender differences were found emerged with respect to evaluative criteria and Internet use patterns, with men liking some of the business purpose websites and women using academic Websites more than men(Ananda Mitra ,2000)[35].

Odell et al (2000) found out some of the gender differences in attitudes toward technology, intensity of Internet use, online applications preferred, and experience in cyberspace. Investigations of college students in use of Internet had proved especially insightful, as research on this group that allowed for an examination of gender differences within an institution in which men and women generally had equal access to Internet (Goodson, McCormick, & Evans, 2001; Odell, Korgen, Schumacher, & Delucchi, 2000)[36] as well as the general population (Brenner, 1997; Jackson, Ervin, Gardner, & Schmitt, 2001; Newburger, 1999; Ono & Zovodny, 2003)[37],The scholarship on gender and Internet use is contradictory at times, demonstrating the dynamic nature of the interaction, as well as the need for continued investigation (Odell et al., 2000)[38].

Smith and Necessary (1996) conducted a study amongst college students' attitudes toward Internet technology, which found that males had significantly more positive attitudes toward computers than females did (Smith and Necessary J. R,1996)[39].

Eagly, A..H., & Johnson, B. T. (1990) also found that females in general reported less favourable computer attitudes. Several investigations had reported that gender had no significant effect on any of the dimensions of their attitudes regarding computers that were studied (Eagly, A..H., & Johnson, B. T. ,1990)[40].

Goodson, C. (2001) also conducted a study amongst college students and found that female college students to possess more positive attitudes than their male peers (Goodson, C.,2001)[41].

Ira M. Wasserman and Marie Richmond-Abbott(2002)[42] examined differences in the use of the Internet by gender, with a consideration of access to the Internet, use of communication facilities related to e-mail and chat rooms, frequency of use, and type of websites used.

The study reflected on the impact of socio-economic status and social, geographic, racial, and ethnic variables for explaining variations in the use of the Internet by men and women, and how these factors were mediated by knowledge of how to use the Internet. The study employed data collected by the General Social Survey (GSS) in the year 2000, and relates access, communication levels, frequency of use, and types of sites used to gender and other relevant variables. The relevant variables were analyzed by multivariate analysis. Access to the Internet was independent of gender, but was related to education, race, income, age, and marital status. Women were less likely than men to chat on the Internet, but were slightly more likely to use e-mail, and they utilized different types of websites than men. Women accessed the Internet as frequently as men, but they communicated on the Internet differently than men, are online less than men, and utilize different types of websites than men. The result of the study found out that Knowledge related to web use is an important independent variable that influences Internet use by men and women (Ira M. Wasserman and Marie Richmond-Abbott,2002)[42].

In the area of Internet use and online application used by male and female various researches have been conducted by following authors. (Goodson, McCormick, & Evans, 2001; Jackson et al., 2001; Morahan-Martin & Schumacher, 1997; Odell et al., 2000; Scealy, Phillips, & Stevenson, 2002)[43].

According to Media Report for Women (2000), females were using e-mail to enrich their interpersonal relationships and enlarged their social networks. It has been argued that female Internet users' affinity for electronic mail replicated preexisting gender differences, considering the fit between women's expressive styles and the features of e-mail (Boneva, Kraut, & Frohlich, 2001)[44]. Whatever the reason, women had reported that e-mail messaging as the most important function of the Internet (Wilson, 2000)[45] and reported more to use of e-mail more than do males (Boneva et al., 2001; Jackson et al., 2001)[46].

Concluding Remarks:

The brief review of study on Online shopping Vs Offline shopping indicated that Consumer's perception regarding the credibility or reliability of shopping over the Internet is affected to the Online shopping. Since Internet qualified for commercial use, several studies have highlighted that, due to the special characteristics distinguishing transactions in digital markets from those traditionally undertaken in physical markets, there is a need for online companies to generate trust and security so that consumers may develop purchasing processes on the Internet websites. The type of perceived risk and lack of consumer trust in online shopping medium is one of the principal inhibiting factors of electronic transactions. Furthermore, it is to be expected that online shoppers will not get involved in a transaction on the Internet unless the perceived level of trust exceeds the minimum level acceptable to the shopper.

The overall results of the study indicated that in order to successful and profitable Online shopping, understanding customers' needs is essential. Providing well-organised and correct product-related information; Security related Services and well managed after sales services increases customers' trust in their own skills and thus lowers the barrier to make the actual purchase online. This emphasized that the influence of a functioning and easy system it is essential to ensure customers' satisfaction with the online retail shop.

SELECTED REFERENCES:

1) Vipan Kumar(2003); Nistad news; Information Technology; Vol.2; No.3; 2003; PP.1-16.
2) P.Subbarao. (2001); The Net Generation: IT Industry; Journal of Computer-Mediated Communication ;Vol. 34; No. 19, 419–510.
3) C.M.Abhilash (2002); E-commerce law in developing countries: An Indian perspective; Journal of Information and Communication Technology Law; Vol.11, No.3; 2002; PP.269-280.
4) Sunil Kr. Gandhi(2000) E-Commerce And Information Technology Act, 2000 at http://www.cbi.umn.edu/iterations/parthasarathy.pdf
5) C.M.Abhilash (2002); E-commerce law in developing countries: An Indian perspective; Journal of Information and Communication Technology Law; Vol.11, No.3; 2002; PP.269-280.
6) Mr Pravin Anand(2005);India's First Cyber Law And A Primer On Regulatory Norms In 'Indian' Cyberspace. www.Internetpolicy.net/principles/021122India-lessons.pdf
7) Subhashit Basu and Richard Jones (2005); Indian informational and technology act 2000: Review of the regulatory powers the act; International Review of Law Computers and Technology; Vol.19, No.2; 2005; PP.209-230.
8) Tim O'Sullivan, John Hartley, Danny Saunders & John Fiske (1985); It act and E-commerce act
9) Brenda Kienan (2000); Information Technology in India; available at www.etcnewmedia.com/review/default.asp?SectionID=11&CountryID=6
10) Eun-Ju Kim (1993); new privacy concerns: ISPs, crime prevention and consumers' rights; International Review of Law Computers and Technology; Vol.14, No.1; 1993; PP. 55-61.
11) Ajmal Edappagath(2004) Cyber-Laws and Enforcement available at www.Indianembassy.org/Indiainfo/India
12) Sita Mishra(2007); Consumers' attitude towards online shopping for clothing; The ICFAI Journal of Marketing Management; Vol. No.6, No.1; 2007; PP.32-40.
13) Rajdeep Grewal (2001); James M. Comer and Raj Mehta(2001); An Investigation into the Antecedents of Organizational Participation in Business-to-Business Electronic Markets;Vol. No. 65,No.3; July 2001; PP.17-33.
14) Porter, L. V., & Sallot, L. M. (2003); The Internet and public relations: Investigating practitioners' roles and World Wide Web use; Journalism & Mass Communications

Quarterly, Vol. No. 80, No.3,PP. 603-616.

15) Darshna Parikh(2006); Profiling Internet shoppers: A study of expected adoption of online shopping in India; Indian Institute of Management Review; Vol.2; September 2006; PP.221-231.

16) James Katz and Philip Aspden(1997); Motivations for and barriers to Internet usage: results of a national public opinion survey; Internet Research: Electronic Networking Applications and Policy; Vol. No.7 ; No 3 ;1997 ;PP. 170–188.

17) Thompson S.H. Teo(1998); Differential effects of occupation on Internet Usage; Internet Research; Electronic Networking Applications and Policy; Volume 8 ; No 2 ; 1998; PP. 156–165

18) Jessica Lichy(2000); A Comparative Study of Internet Usage in France and the UK ; International School of Business and Management;Vol.5,No.2, 2000; PP. 29-38.

19) Alexander Mentrup, Simon Robinson, Karsten Gareis(2007) ; User Behaviour and Attitudes Towards Consumer Issues on Markets for Online and Mobile Products & Services; Expanding the Knowledge Economy: Issues, Applications, Case Studies; Vol.12; No.1; 2007; PP.28-33.

20) P J du Plessis, P G Mostert and E J North(2004); Period of Internet Usage: An Indicator of the Buying Behaviour of Internet Users?; SAJEMS; Vol No. 7; No 1; 2004.Wal J. Taylor, Grant X. Zhu, John Dekkers and Stewart Marshall(2003); Socio-Economic Factors Affecting Home Internet Usage Patterns in Central Queensland; Informing Science Journal; Volume 6;2003; PP.23-40.

21) Ira M. Wasserman and Marie Richmond-Abbott (2000); Gender and the Internet: Causes of Variation in Access, Level, and Scope of Use; Cyber Psychology and Behaviour; Vol. No.2; No.3; 2000; PP.No.35-47.

22) Weiser, E. B. (2000); Gender differences in Internet use patterns and Internet application preferences: A two-sample comparison; Cyberpsychology & Behavior; Vol. No.3, No.2; PP. 167-178.

23) Sherman, R. C., End, C., Kraan, E., Cole, A., Campbell, J., Birchmeier, Z., & Klausner, J.(2000). The Internet Gender gap among college students: Forgotten but not gone?; Cyberpsychology & Behavior; Vol.No. 3; No.5; PP. 885-894.

24) Bimber, B. (2000); Measuring the gender gap on the Internet. Social Science; Quarterly; Vol. No. 81; No. 3; 2000; PP 874.

25) The Pew Internet Project (2000, March). How Women Use the Internet to Cultivate Relationships with Family and Friends (Tracking Online Life). Washington, DC: Rainie, Lee. Retrieved May 3, 2004, from Pew Internet & The American Life Project Web site: http:/_/_www.pewInternet.org/_reports/_reports.asp?Report=11

26) Alreck, P., & Settle, R. B. (2002); Gender effects on Internet, catalogue and store shopping; The Journal of Database Marketing; Vol.No.9; No.2; 2002; PP. 150-161.

27) Shaw, L. H., & Gant, L. M. (2002) ; Users divided? Exploring the gender gap in Internet use; Cyberpsychology & Behavior; Vol. No. 5 , No.6, PP.517–527.

28) Rosen, L. D., & Weil, M. M. (1994); what have we learned from a decade of research on "the psychological impact of technology?" Journal of Computers and Society; No.3; March 1994.

29) Porter, L. V., & Sallot, L. M. (2003); The Internet and public relations: Investigating practitioners' roles and World Wide Web use; Journalism & Mass Communications Quarterly, Vol. No. 80;No.3;PP. 603-616.

30) Bernoff, J. (2004); Multitasking Dilutes Media Attention; Journal of Service Marketing; Vol. No.2; No.5; 2004; PP.36-45.

31) Buchwalter, C. (2005); Integrated Interactive Marketing: Quantifying the Evolution of Online Engagement; Vol.No. 5; No.9; 2005; PP. 78-90.

32) Rosie Heimrath And Anne Goulding(2001); Internet perception and use: a gender perspective; Program, Vol. No. 35; No. 2;April 2001;PP. 119-134

33) (Boyd, T. C. and Mason, C. H,1999). 'Consumer Reactions To Electronic Shopping On The Internet. Social Science; Quarterly; Vol. No. 81; No. 3; 2000; PP 874.

34) Linda A. Jackson ,Kelly S. Ervin, Philip D. Gardner and Neal Schmitt(2001); Sex Roles; Vol. No. 44; Nos. 5/6; 2001; PP 22-30.

35) Ananda Mitra(2000); Exploring Web Usage and Selection Criteria Among Male and Female Students; Journal of Computer-Mediated Communication; Volumer 10; No 3;2000; PP 26-38.

36) Goodson, C. (2001); Web-connected generation; The Futurist; Vol. No.35; No. 5;PP 1-9.

37) Brenner (1997); Women's perceptions of technological change in the information society;

38) Odell, P. M., Korgen, K. O., Schumacher, P., & Delucchi, M. (2000); Internet use among female and male college students; Cyberpsychology and Behavior; Vol. No.3; No.5, 2000; PP. 855–862.

39) Smith, B. N., & Necessary, J. R. (1996); Assessing the computer literacy of undergraduate college students; Education; Vol No. 117; No. 2, PP.188-193.

40) Eagly, A..H., & Johnson, B. T. (1990); Gender and leadership style: A meta-analysis. Psychological Bulletin; Vol. No. 10; No.8; PP. 233–256.

41) Goodson, C. (2001); Web-connected generation; The Futurist; Vol. No.35; No. 5;PP 1-9.

42) Ira M. Wasserman and Marie Richmond-Abbott (2000); Gender and the Internet: Causes of Variation in Access, Level, and Scope of Use; Cyber Psychology and Behaviour; Vol. No.2; No.3; 2000; PP.No.35-47.

43) Odell, P. M., Korgen, K. O., Schumacher, P., & Delucchi, M. (2000); Internet use among female and male college students; Cyberpsychology and Behavior; Vol. No.3; No.5, 2000; PP. 855–862.

44) Boneva, B., Kraut, R., & Frohlich, D. (2001); Using e-mail for personal relationships: The difference gender makes. American Behavioral Scientist; Vol.No. 45; No. 3; PP. 530–549.

45) Wilson, T. (2000); Web's gender shift more than a curiosity;Internet Week; Vol. 22; PP.827-828.

46) Jackson (2001); "Global networks and the myth of equality: trickle down or trickle away?" in Loader, B.D. (Ed.); Cyberspace Divide, Routledge, London; 1998.

Webliography

1) www.unu.edu/unupress/unupbooks/uu09ue/uu09ue16.htm 03-05-07
2) http://www.iimcal.ac.in/community/consclub/reports/ITAndITES.pdf
3) www.gujaratIndia.com
4) http://www.idcIndia.com/press/April30.html
5) http://www.wisegeek.com/what-is-outsourcing.htm
6) http://www.webopedia.com/TERM/G/Green_IT.html
7) http://www.gisdevelopment.net/proceedings/mapasia/2003
8) www.altassets.com/pdfs/Indiaifc.pdf
9) www.blonnet.com/2007/05/26/stories/2007052600530800.htm
10) www.ciol.com/content/news/2007/107010814.asp
11) www.comsoc.org/dl/gcn/gcn0202.html
12) www.IDC.com
13) www.nasscom.org
14) http://www.dleg.state.mi.us/mpsc/comm/broadband/broadband/broadband.htm
15) http://www.iamai.co.in/section.php3?secid=16&press_id=1106&mon=6
16) www.trai.gov.in/trai/upload/PressReleases/376/pr6oct06no94.pdf
17) http://www.iipa.com/rbc/2007/2007SPEC301INDIA.pdf 29-06-07
18) http://planningcommission.nic.in/plans/planrel/fiveyr/10th/volume2/v2_ch2_11.pdf
19) www.nasscom.org
20) http://www.cbi.umn.edu/iterations/parthasarathy.pdf
21) www.accc.gov.au
22) www.gujaratindia.com.
23) www.gujaratIndia.com.
24) Information Technology; Department of Science and Technology; Government of Gujarat; Available at (www.gujaratIndia.com)
25) www.gujaratbusinessIndia.com.
26) www.epwrf.res.in/upload/MER/mer10807005.pdf.
27) http://www.emergence.nu/events/budapest/ahuja.pdf
28) www.mit.govt.in/ detail IT initiative-2008
29) www.govtofindia.com
30) www.Indianembassy.org/Indiainfo/India_it.htm#Relatedper
31) http://www.accc.gov.au/content/item.phtml?itemId
32) www.gujaratbusinessIndia.com
33) www.mit.govt.in

34) http://www.gujexim.com/tradeleads_it.htm
35) www.mit.gov.in
36) www.Governmentofbelize.gov.bz.
37) www.vibrantgujarat.com/detail-mou-2009.html#7
38) www.mit.govt.in
39) www.Internetworldstats.com/asia 22-05-07
40) http://southasia.oneworld.net/article/view/139805/1/ 05-05-07
41) www.eetIndia.co.in
42) www.imrb.co.in
43) http://www.iamai.in/final_ecommerce_report07.pdf
44) www.juxtconsultant,.com.
45) www.imrb.co.in'
46) www.physorg.com

News paper and Magazines

1) TheEconomic Times (2007); Online shopping Activities in India; The Economic Times, 9th November 2007.