Chapter - II
Research Methodology & Review of Literature

Information Technology Enabled Services, or “ITES”, involve business processes and services that extensively utilize components of information communication technology (“ICT”) such as software, hardware and the Internet. As opposed to the manufacturing industry where products are physically visible, the “raw materials” in the ITES industry are data, information and knowledge. The industry is often referred to as a “knowledge-based” industry; as such, the products and services provided are less tangible.

Research Methodology:

I) Objectives:
1) To study the different segments where ITES is actively providing services
2) To study the progress made by India in ITES
3) To study the progress made by Maharashtra State in ITES
4) To study the performance of ITES in finance sector in Maharashtra
5) To study the use of ITES in government and Semi-Government organizations of Maharashtra
6) To study the impact of ITES in education
7) To study the progress in infrastructural development and major sectors of economy in Maharashtra
8) To study the opportunity resulting in employment through ITES
9) To study the reasons for increase in foreign currency flow with the advent of BPO’s in Maharashtra

II) Research Question:
“ITES is a source of Service Sector Growth and Revenue Generation of Maharashtra State”

III) Research Methodology:
A) Primary Date:
The Primary Data relating to the growth in different sectors impacted by ITES in Maharashtra is collected through pilot surveys.

**B) Secondary Data:**
Secondary Data is collected through Research Journals, Annual Reports published by different Organizations, Magazines, Newspaper write-ups and Websites, Govt of Maharashtra Reports of different departments.

**C) Tools used:**
1) Chart are used for presentation
2) Percentage Analysis
3) Correlation Analysis
4) Calculation of Compound Annual Growth Rate (CAGR)

**D) Period of study:**
10 Years i.e. 2002-2012

**IV) Limitations of the study:**
The study is restricted to the Maharashtra State especially covering the period of 10 years. Due to a number of constraints only ITES adopted by selected segments is studied.

**V) Scope of the Study:**
The scope of the study covers the progress made by Maharashtra using its man power resources and there IT skills. The study is divided into five chapters covering the progress in post liberalization era, projecting India’s competitiveness and its effectiveness the world over. Maharashtra being one of the progressing states of India has made tremendous progress in the field of IT and a leading provider of ITES.
The study provides scope for conducting further studies in the areas of:
1) ITES growth in India
2) ITES in improving financial services
3) Role of ITES in Public administration
4) Role of ITES in generating employment opportunity in India
5) Role of ITES in providing modern education
VI) Chapter Scheme:
1) Introduction
2) Research Methodology & Review of Literature
3) ITES growth in India & Maharashtra
4) Data Analysis and Interpretation
5) Summary, Conclusion and Suggestions
   • Bibliography

Review of Literature:

Articles from Journals:
1) Seema Joshi (2009), Institute of Economic Growth University of Delhi Enclave North Campus, IT and ITES as an Engine of Growth: An Exploration into the Indian Experience, New Delhi, Working Paper Series No. E/294/2009:

In this paper it is stated that India emerged as one of the fastest growing economies of the world during the 1990s because of the spectacular dynamism shown by the service sector. India’s services sector has been growing fast and one of the major driver’s of the growth of services sector is information technology (IT) and Information Technology Enabled Services (ITES). It is well documented in literature that IT impacts growth by different channels. This paper try to empirically verify the question: can IT and ITES be an engine of growth? Using micro-level data of 100 households of 20 IT and ITES firms along with secondary data, the author tried to estimate the extent of indirect employment generation at macro level and the share of IT and ITES in total employment and total value added. According to this paper, one job for skilled professional employed in IT and ITES spins off jobs for 0.48 semi-skilled, low skills or unskilled workers. As per this estimates, the 16 lakh workers who are expected to be directly employed in IT sector in the FY 2008 would generate secondary employment for 7,68,000 people which would constitute 0.16 % of total employment. However, the share of consumption expenditure of 16 lakh professionals
would be 20% of total value added. Assuming the consumption expenditure of the IT and ITES workers and total value added to be the same/constant when we tried to assess the contribution of consumption expenditure of 2.3 million workers (who are projected to be directly absorbed by IT sector by 2010, NASSCOM, 2005) to total value added it comes out to be 29% of total value added. The research says that the proportion of IT-ITES in total employment may be small but its contribution to total value added is still very high. Indeed IT and ITES can be an engine of growth in India’s economy by way of generating demand impulses in the economy as has been hypothesized and shown through the present research. Keeping in view the contributions of this sector and its huge untapped potential as evident from the present research and various other studies, there is a need for introduction and implementation of policy initiatives to address the challenges faced by this sector and to sustain the growth driven by the services sector.

2) Soni Agrawal, Kishor Goswami, Bani Chatterjee (2011) International Journal of Humanities & Social Sciences, Challenges of ITES Companies in India, Centre for Promoting Ideas, USA:

This paper focuses on Information Technology Enabled Service companies in India which are providing services to domestic as well as offshore clients because of the availability of low cost talented English speaking employees. The growth of outsourcing industry in India is impressive and companies are providing services in low-end as well as in high-end services. However, sustaining this impressive growth is not possible always as these companies are facing continuous challenges in terms of competition, global slowdown, scarcity of talent, attrition of employees, and many other HR and technology related issues. The present paper investigates the challenges of the ITES companies in India. It discusses the problems, preventive measures and strategies followed by the ITES companies using case study methods.
3) N. Swapna1 & N. Sujatha (2010), Special Issue of International Journal of Computer Science & Informatics (IJCSI), Trends of IT Industry in Indian Economy – An Analysis, ISSN: 2231–5292:

The Indian Information Technology and Information Technology Enabled Services (IT-ITES) industry has been contributing its role in the economic development of India since post liberalization era. The pace growth of this industry is considered as a growth driver for the economy. India has become “IT Super Power”. The performance of IT industry can be revealed with the evidence of its contribution to the GDP (Gross Domestic Product) of the country, provision of employment opportunities all over the country, IT services and software exports and revenue to the country. This paper examines how does the IT industry is playing its predominant role in Indian economy with its various trends in the contribution to the GDP of India, IT exports, IT revenue trends and employment opportunities.

4) Ashish Arora & Surendrakumar Bagde (2009), Heinz School of Public Policy and Management, The Indian Software Industry: the Human Capital Story:

In this paper the Indian software industry has been widely studied. Previous researches have recognized the role of skilled labor in the growth of the industry, but have not empirically investigated the role of skilled labor. In this paper the authors have focus on the role of human capital in the regional location of the software industry. Specifically, they find the effect of the engineering college capacity for undergraduate engineering studies in different Indian states on the regional growth of the software exports industry between 1990 and 2003. They have find significant effect of human capital on the growth of software exports even after controlling for other relevant factors. In addition the initial as well as current size of electronics hardware industry also plays important role in the regional growth of the software exports industry.

This paper is divided into five sections. Section I briefly reviews India’s growth performance since 1950 and indicates a few salient features and turning points. Section II discusses some of the major drivers of India’s current growth momentum (which has averaged 8 percent in the last 3 years) and raised widespread expectations (at least, in India) that 8 percent plus growth has become the new norm for the Indian economy. Section III points to some of the risks and vulnerabilities that could stall the current dynamism if corrective action is not taken. Section IV appraises the country’s medium term growth prospects. The final section assesses some implications of India’s rise for the world economy.


India’s software & services exports have been rising rapidly. The annual growth rate ranges between 20-22% in IT services and nearly 55% in IT-enabled services (ITES), such as call centres, Business Process Outsourcing (BPO) and other administrative support operations. Together they are predicted to grow at 25% pa till 2010. The IT industry is highly export oriented and the exporters are predominantly Indian. The Indian BPO’s (ITES) are moving up the value chain, handling high end data for airline information, insurance, banking sector and mortgage companies, enterprise resource planning, among others. Some of the companies have already moved into significantly higher value added segments such as mission-critical applications, development & support, product design, HR Management, Knowledge Process Outsourcing (KPO) for pharmaceutical companies and large complex projects. The Information Technology industry currently accounts for almost 4.8% of India’s GDP. It will account for 7% of India’s GDP by 2010.

India has emerged as an ‘IT Super power’, especially in the field of software and related services export. The paper is an attempt to discern and delineate the growth performance, challenges and opportunities of such a promising sector of Indian economy. It has been observed that software export has registered an annual compound growth rate of 45 per cent during the last decade and continues to show robust growth even today. Growing respect for Indian software industry in the international market, continued rise in the offshore services, quality services, timely delivery, entry into new markets, Y2K data conversion business, international linkages and also due to various steps taken by the Government to promote software export such as simplifying procedures, tax concessions, establishments of software technology parks, more liberal foreign investment policies, possession of second largest pool of scientific and skilled manpower which is also English speaking, low cost of labor, location time difference with the western world enabling round the clock development, proactive role by Nasscom (the software industry association), etc. are some of the factors that gave fillip to the faster growth of India’s software export. Undoubtedly other developing countries can learn lessons from India’s experience and can develop IT capabilities by mutual cooperation.


This paper discusses the possibilities for broad-based IT-led economic growth in India, including increasing value-added, using better telecom links to capture more benefits domestically through offshore development for developed country firms, greater spillovers to the local economy, broadening the IT industry with production of telecom access devices, improving the functioning of the economy through a more extensive and denser communications network, and improving governance. We also
examine the policy environment, arguing that government policy is better focused on removing labor market distortions and infrastructure constraints, rather than providing output or export subsidies to the software industry.


IT industry has changed the image of India in the global arena. Today’s highly developed IT industry is the result of many external and internal factors which worked over a long period of time. This paper is based on Secondary data which tries to analyze the growth, features and reasons for the development of IT sector in India. Challenges faced by Indian IT sector too were manifold.

10) Dr Seema Joshi, (2008), Expansion and Development of the Service Industry in Asia, Sector in India’s Economy: Performance, Problems and Prospects, Asian Productivity Organization (APO), Seoul, Republic of Korea:

The remarkable performance of India’s economy is attributable in significant part to the spectacular dynamism shown by the services sector. This paper addresses the following six issues: Firstly, what are the constituents of service sector in India? , Secondly, how this sector performed on growth and employment fronts? Thirdly, what happened to service sector productivity in post 1980 period? Fourthly, what are the policies adopted by the government of India to promote the services sector? Fifthly, what are the problems or challenges ahead in this sector? Lastly, what are the prospects /potential for growth in this sector?

A modest attempt has been made to answer the above-referred questions in this paper. This paper is organized into seven sections. Section II gives the composition of service sector in India. Section III discusses the performance of services sector in India. Section IV focuses in brief on promotional policies of Government of India. Section V
points out the problems/challenges a head in this sector. Section VI briefs about the potential for growth in this sector and Section VII concludes.


Services sector has been particularly important for India. This paper focuses on the major policy issues for India’s services sector. In the beginning, the paper dwells briefly on the importance of services for India in terms of GDP growth, services export growth and openness of the economy; the country-wise exports of services of India; and the important services for India. The paper then directly examines the major policy issues under three major headings: domestic policy issues, domestic regulations and market access issues.

Domestic policy issues cover many areas like FDI, disinvestment, tariff & trade, credit & finance and other general & sector-specific policy issues. FDI related policy measures include putting the FDI policy on the website in a user friendly way and opening at least some segments of insurance sector like health insurance. Policies for disinvestment include a listing of PSUs in services sector for disinvestment. Tariff and tax related policy measures include many suggestions like rationalization of taxes in shipping and telecom sectors, allowing advance tax instead of TDS in some services and a single return for service tax and excise tax which is being administered by the same department. Credit & finance related issues include exempting External Commercial Borrowings (ECBs) from withholding tax for financing export-related activities and overseas acquisition including acquisition of ships. Other general and sector specific issues include among others increasing visibility of India in services, facilitating services exports by setting up joint offices with common facilities, setting up a portal for services, resolving the issue of preconditions in overseas tenders, facilitating international accreditation for Indian health services and skill certifying unskilled labor.
Domestic regulations perform the role of tariffs in regulating services. So the paper underlines the need to list domestic regulations in India which need to be disciplined to help the growth of the services sector and exports, while retaining those domestic regulations which need to be retained at this stage. Some of the policy suggestions related to domestic regulations include addressing restrictions on inter-state movement of goods, resolving the issue of ban on use of logos of accounting firms, removing the unnecessary regulations under Banking Regulations Act and competition policy for services. Market access issues include domestic regulations, subsidies and other barriers in India’s major markets which deny market access for India’s services exports. Some examples of such issues are dealt in this paper. In the Executive Summary and Conclusion, the important reforms which need to be initiated and implemented in the short run are listed. This paper concludes that immediate and time-bound reforms in the services sector could not only help in attaining India’s targeted GDP growth rates, but also give a fillip to growth and exports of this services-led-economy.

12) Rita Bhowmik, Globalization and Service Sector: Input-Output Analysis, Jadavpur University, Kolkata:

Globalization implies a comprehensive and self-evident process working towards establishing a worldwide aggregative whole of an economic structure into which all economies of the world must integrate today or tomorrow. This includes services which in most economies are the single largest contributor to economic growth and employment. It is widely recognized and deliberated upon that the global importance of service sector in terms of its share in Gross Output has been growing progressively in the economies of the world. The objective of this paper is to make an assessment of the global importance of the service sector which accounts the value added originating from service sector in total value added produced, needed directly and indirectly to produce gross output in the economy. For this purpose, an index of vertical integration has been constructed which provides a dimension-free measure of the multiplier of each industry on the value-added originating from the service sector to total value
added. In this regard, the already well developed input-output technique has been used. The computations and results of the assessment of the global importance of service sector by input-output matrix method have been applied for India in 1993-94. Empirical part of this study shows that other services, Trade, Chemicals, Construction, Minerals, Electricity, Rail Transport Services, played as a role of key sector in terms of importance of service sector as input for their production in the Indian economy. They provided strong stimulus to the economy by inducing greater value addition to service sector. In general, services industries appear to be the highly growth-inducing sector in so far as they help higher value addition to other industries in the economy.


In the age of globalization & societal transformation, the composition of GDP has witnessed shifting trends. Now a days India is being posed as the most potential and growing economy of the world not only in terms of market size but also in terms of technology up gradation. In 1950 when Indian republic status was declared the economy was characterized by legacy and imprints of colonial gesture. In view of the need of planned economy, the govt. initiated process of planning through five years plans with establishment of planning commission in 1952 followed by National Development Council (NDC). The purpose of planning was to identify, generate & distribute the available resources (physical, natural & financial) in equitable manner for the ultimate upliftment of the society in consonance with the constitutional mandate of providing a socialist pattern of society. The growth experience of Indian economy has witnessed structural changes which are reflected in eleven five year plans. Despite various hurdles on political, economic, social & technological fronts we are able to sustain our growth trajectory during last 60 years of republic. As a matter of proud, the govt. targets the inclusive growth during the 11th five year plan which is nothing but only an extension of indicative planning targeted during 8th five year plan. While evaluating the performance & contribution of Service Sector in Indian
economy, the transformation of world trade with the emergence of WTO and its impact on the trade pattern and behavior in context of India has to be judged. Though all three sectors of economy have seen tremendous growth and contributed to the GDP during the last sixty two years, the growing importance of service sector particularly in the aftermath of reforms is a sign of India’s being projected as superpower of future. This paper has been divided into five parts. The first part of the paper deals with the conceptual framework defining and classifying services according to different parameters. The second part of the paper is devoted to find a track record of service sector growth pattern during five year plans i.e. evolution of services as a major contributor of the GDP. The third part of the paper is dedicated to the performance of service sector and various service sub sectors in the aftermath of LPG i.e. after 1991. The next part of the paper discusses about the drivers of growth in service led economy of India. The fifth part of the paper is an attempt to identify some issues and challenges related to service trade w.r.t. GATS. In the last, conclusion has been drawn based on the preceding discussion.

14) K.V. Ramaswamy, Tushar Agrawal, (2012), Indira Gandhi Institute of Development Research, Services-led Growth, Employment and Job Quality: A Study of Manufacturing and Service-Sector in Urban India, IGIDR, Mumbai, WP-2012-007:

This paper is based on employment growth, structure, and job quality outcomes in manufacturing and service-sector in urban India spanning the period 1999-2000 to 2009-10. The context is that of dynamic growth of service-sector in India beginning in the 1990s. This has raised the question whether India will skip the traditional sequence of agriculture to manufacturing with services taking up the leading sector role in India’s growth path. They studied employment growth and related aspects of employment structure using the NSS surveys of employment and unemployment carried out in 1999-2000 and 2009-10 with a view to throw more light on the future role of manufacturing and services as providers of employment to large numbers joining the labor force. They did not find any acceleration in the service-sector
employment growth relative to manufacturing in the urban areas of India. The good news is that young males have increased their share of regular employment both in manufacturing and services. However, we find greater duality in services sector in terms of the incidence of informality and wage inequality. In the service-sector those with more skills have received higher increases in real wage. The service-sector is relatively more skill demanding than manufacturing. They showed that skill composition of the workforce is markedly different between the two sectors with services clearly skill biased. Social security conditions are not found to be relatively much superior in services. Our results strongly suggest that service-sector is an unlikely destination for the millions of low skilled job seekers. India needs to focus on manufacturing sector to provide large scale employment.

15) Avadhoot Nadkarni (2012), Planning Commission Chair & Unit in Planning & Development, Services Sector Growth in India: Toward Some Dynamic Explanations, Department of Economics (Autonomous), University of Mumbai, Mumbai, WP/ECO/DTL/12/02:

The paper suggests answers to two important questions that arise in the context of the increasing importance of services sector in India in the recent years. First, is the services sector dominance in India is premature. The answer is in the negative, given that even in the classical studies of structural transformation the conclusions about the sectoral share of services were not as firm as those about agriculture and industry; and also given that plausible values of sectoral elasticities of demand and productivities can simulate the observed sectoral shares. Secondly, given the widely accepted assumption of low productivity growth in services, which implied a deceleration of aggregate growth in developed countries in the 1970s in the context of their growing share of services, can an economy with a dominant services sector produce high aggregate growth rate. This can happen if the services output is more in the nature of intermediate goods like business services rather than final consumption goods, which seems to be the case in India.
16) Rakkee Thimothy (2006), Centre for Economic Studies and Planning, Changing Structure of the Service Sector Employment in India, Jawaharlal Nehru University, New Delhi:

‘Services’ represent a heterogeneous group of activities and has now become a prominent sector in the economies of most developed and developing countries, in terms of its contribution to national income, trade flows and foreign direct investment. The case of India is also not very different, although the recent euphoria is created by increasing tradability caused by the changing nature of services, invention of technology, and opportunities opened by General Agreement on Trade in Services. The service sector in India is characterized by the asymmetrical relationship between income and employment generation. The increasing share of services in GDP (54.1%) and stagnant employment generated (24%) from the sector can have grave implications for the country where unemployment continues to be a major problem. The reasons for the asymmetrical relationship in income and employment generation, is embedded in the pattern of service sector growth experienced in the country.

17) Rubina Verma (2006), India’s Service Sector Growth - A “New” Revolution, University of Southern California:

Following the trade liberalization in 1991, the Indian economy embarked on a path of rapid growth of aggregate output. In particular, it witnessed a high growth rate of service sector output while that of industry was relatively muted. As a result, the share of services in GDP has come to resemble that of a high income country while its per capita income still remains that of a low income country. Further, we also observe a sharp increase in the rate of growth of service sector trade after liberalization. In this paper, we build a quantitative model which captures a falling share of agricultural output and a rapidly increasing share of service sector output as the economy grows. We develop a three sector open economy growth model and allow the economy to trade with the rest of the world by exporting as well as importing services and industrial goods. We focus on two steady state years, 1970 and 1994, and assume trade
to be balanced in these two years. In addition, we allow for exogenous productivity growth in each of the three sectors. We find that it is high productivity growth, especially in the service sector, rather than growth of trade in services which the primary factor is driving the high growth witnessed by the Indian service sector.

18) Deepita Chakravarty (2005), Centre for Economic and Social Studies, Growing Services in India - An Inter-Sectoral Analysis Based on State-Level Data, CESS, Hyderabad, Working Paper No. 64:

This paper focuses on inter-sectoral analysis of state domestic product data to understand the determinants of the services sector growth in India during the recent years. It is a demand side analysis where the services sector output of a specific state is not only a function of the outputs of a state's own agriculture and industry but also the output of the commodity-producing sector of the rest of the Indian economy. The findings suggest that while a state's own industry turns out to be the most important determinant of the services sector growth, the commodity-producing sector of the country outside the state does play a significant role as well in determining the services sector performance under certain conditions that basically relate to the supply side. The paper essentially is an explorative analysis and has not attempted at making any precise econometric estimation.

19) Dr. Arjun Singh Sirari, Mr. Narendra Singh Bohra (2011), International Journal of Economic Research, Foreign Direct Investment FDI) In India Service Sector (A Study of Post Liberalization), ISSN: 2229-6158, Pg No 10-18:

FDI is a tool for economic growth through its strengthening of domestic capital, productivity and employment. FDI also plays a vital role in the up gradation of technology, skills and managerial capabilities in various sectors of the economy. The present paper attempts to analyze significance of the FDI Inflows in Indian service sector since 1991 and relating the growth of service sector FDI in generation of employment in terms of skilled and unskilled.
20) Sarika Sharma (2009), Department of Commerce, Indian Railways: The backbone of service sector, BHU, Varanasi:

Starting in 1990s, Indian economy has been sharing a common feature in the composition of its Gross Domestic Product (GDP) in the form of the rising contribution of the service sector. Service sector with double-digit growth during the past two year i.e. 2004-05 & 2005-06 has further strengthened its place as the leading sector of the Indian economy. Service sector now accounts for more than 60 percent of overall GDP. In service sector, Indian Railways play very significance role for upliftment of Indian economy. Indian railways are the world's fourth largest rail network and second largest rail network under the single management in Asia. Indian railways has been performing exceedingly well, during 2006-07, gross earnings went up by 14 percent to register US $ 18.19 billion as against US $ 13.25 billion in previous year, while passenger earnings accounted for US $ 4.19 billion, freight earnings accounted for US $ 10.16 billion. Total freight increased to 728.41 mt. during 2006-07 from 666.51 mt. in 2005-06. Indian Railways is very important part of service sector, which provide effective and direct services to the Nation and its population. Therefore purpose of this paper is to give present scenario of service sector specially focuses on Indian Railway in this concern paper elaborate the importance of Indian Railways in service sector, services provided by the Indian Railways, it's contribution in GDP of India and measure the performance of service sector. Furthermore paper try to summaries the GDP growth and share of service sector in its percentage.


India is now known globally for its new mantra- Information Technology, which has its roots in the ‘Strategic Infection’ started by the success of India’s export led software industry. Just a few years ago, a small group of initiators ‘within’ the government and entrepreneurs ‘outside’ versioned the opportunities and started
branching form export of software to “IT Enabled Services”. The government respondent to this move as a silent spectator, rather than imposing rules and controls. But within two years of this great initiative, even the government has come up with full support to change the environment for Information Technology (IT). While the initial phase of IT in India witnessed a very small segment of public representative in the government and entrepreneurs managing the micro environment to get more and more Information Technology related business to India, the government will now enable a paradigm shift to “Hub to Globally Competitive value services” as against talent provider (Long Term National IT Policy), thus working as a catalyst to change the macro environment to suit this opportunity.

22) Dr Prabhudev Konana, Dr Sridhar Balasubramanian (2001), McCombs School of Business, India as a Knowledge Economy: Aspirations versus Reality, UT-Austin:

A knowledge economy is one that relies intensively on human skills and creativity, the utilization of human intellectual capital supported by life-long learning and adaptation, the creative exploitation of existing knowledge, and extensive creation of new knowledge through research and development.


This essay explains how the domestic policy context enabled the Indian software industry to become the largest non-OECD (Organization for Economic Co-operation and Development) exporter by 2000. The policy context is examined in three phases. Prior to 1984, rigid policy restrictions ensured that there was virtually no software industry. In the second phase (1984 to 1990), the restrictions were eased and Indian
firms entered the global market by providing low-cost programming services. In the third phase (1990 to 2000), pro-active promotion of the industry, along with economy-wide policy liberalization, led to rapid growth in exports. The nature of exports also changed from providing programming services at client sites, to providing offshore services from India for turnkey projects demanding a wider range of capabilities. The policy changes themselves are explained in terms of the changing character of state institutions. The essay also discusses the relevance of the Indian case for policy initiatives in other countries.

24) Prabir De (2010), Research Information System for Developing Countries, Barriers to Trade in Services in India, RIS, New Delhi:

This paper is an outcome of ARTNeT gravity modelling initiative on “Behind the order” factors affecting trade. International trade in services has become more important in recent years as advances in technology have permitted new means of providing services across borders. While there is little doubt that services trade is an essential ingredient to economic growth and sustainable development, it is widely accepted that it can only make such positive contribution if appropriately liberalised and implemented across countries (Copeland and Mattoo, 2008). An efficient services sector is crucial for the growth and competitiveness of an economy.

Services have emerged as crucial economic activities for India in recent past. It not only provides the bulk of employment and income in India, services sector also serves as vital input for producing other goods and services. The importance of services is therefore increasingly reflected in the policy agenda – ranging from liberalization to promotional efforts to regulation at national and international levels.

The perception of an industry is generally shaped by official statistics. In the case of the Indian information (IT) industry\textsuperscript{1}, the statistics are not even official. All statistics on it are generated by National Association of Software and Service Companies (NASSCOM). This energetic industry association had 850 members at the end of 2002 (NASSCOM 2003a:17); it claimed that they accounted for over 95 per cent of the industry’s revenue. There are clearly many firms in the industry that are not members of NASSCOM; a single directory, for instance, lists over 4000 firms (EFY 2002). Although there is no reason to expect a bias in NASSCOM’s figures, they are projections from its members’ figures. A comparison with IT export figures recently released by Reserve Bank of India shows that NASSCOM’s figures are within 10 per cent of gross exports. Imports are less than 10 per cent of exports; NASSCOM does not estimate them\textsuperscript{2}. The official and NASSCOM figures are comparable; the difference between them could be due to leads and lags. In the rest of the paper we will use the NASSCOM figures. But we should at the outset point out the shortcomings of defining the Indian IT industry in terms of what happens within India’s borders. Thus defined, the industry includes the subsidiaries of multinational companies, which are an integral part of their global operations. NASSCOM estimates their share in the sales of the Indian industry in 2001-02 at 26.6 per cent. On the other hand, Indian companies have affiliates and subsidiaries abroad. The accounts of selected IT companies show financial investments to have been 24 per cent of their gross assets in 2001-02; virtually all of those would be abroad. If we think in terms of Indian entrepreneurs, 21 of the 25 Indian entrepreneurs chosen by Naroola (2001) This paper refers to information technology, and excludes communications, which have their own complex story in India. It covers software-related services, ranging from simple code-writing to setting up, managing, maintaining and modifying information systems. Although Indian firms have worked on telecommunication software, they have virtually no links with the Indian telecommunication industry, firms in which are mostly joint ventures between Indian business houses and overseas telecommunications operators.
Information technology has profound effect on the progress and development of human civilization. The advances in science and technology has made a tremendous improvement and changed all activities of present society. Due to revolution of information technology, increased tremendously demand, consumption, and importance of information in present society. The librarians are faced challenges to managing massive volume of information for storage, process, retrieve, and disseminate in libraries (Ramana, 2004). Rapid advances in Information Technology in the past two decades have brought revolutionary changes in the concept, organization, functioning and management of library and information systems through out the world. The modern technology has greatly improved the capabilities of managing this explosive growth of information effectively. Information technologies today are characterized by their very dynamic development and increasing complexity. Information technology application in library and information field has made remarkable progress in the world. Information Technology not only affects the technical services of libraries but also shapes the library services that are being offered to the public. Worldwide libraries have been exploring new technologies for providing better and faster access to vast information resources and efficient information services to their users. Information Technology has offered better solutions to achieve greater level of efficiency, productivity and excellence services in libraries (Cholin, 2005).

27) Srijit Mishra, Manoj Panda (2005), Indira Gandhi Institute of Development Research, Growth and Poverty in Maharashtra, IGIDR, Mumbai:

Maharashtra is among the richest states in India in terms of per capita income, yet incidence of poverty in the state remains close to the national average. The state’s economy grew at a faster rate than the all-India average during 1980-1 to 1992-3, but
it slowed down a bit during 1993-4 to 2003-4 due to poorer performance of agriculture and industry. Agriculture’s contribution to GSDP has come down to 12 per cent in 2002-3, but more than 50 per cent of total workers are still engaged in this. Cropping pattern has been shifting to greater value addition non-cereal crops like fruits, vegetables, oilseeds and sugarcane. Composition of manufacturing has shifted towards more capital-intensive sectors. Communication, transport and public administration have accounted for large part of service growth. The benefits of this growth process have, however, not spread equally across social groups or regions, which partly explains prevalence of high poverty compared to other states at similar mean income.

The much talked about Maharashtra Employment Guarantee Scheme (MEGS) has had limited success and its coverage across districts/divisions is not proportionate to the share of poor. Despite these developments, rural poverty has reduced from 38 per cent in 1993-4 to around 24 per cent in 1999-2000. Given current investment flows, the overall growth potential of Maharashtra does look bright for the medium run. But, distributional implications of the emerging growth pattern across sectors suggest that the poor might not benefit proportionately from the growth process. The lessons that Maharashtra provides is that growth has to be more broad-based and inclusive, and that intervention through social welfare programmes like MEGS should be designed to suit the local resource base of poorer regions for faster poverty reduction.

28) Surabhi Mittal, Gaurav Tripathi (2009), Agricultural Economics Research Review, Role of Mobile Phone Technology in Improving Small Farm Productivity, Indian Council for Research on International Economic Relations (ICRIER), New Delhi, Vol. 22 (Conference Number) 2009 pp 451-459:

Telecommunication, especially mobile phones have the potential to provide solution to the existing information asymmetry in various lagging sectors like agriculture. India’s agricultural sector suffers from low growth rates and low productivity. Issues in access to information are weak points at every stage of the agri-supply chain. For small farmer-based economy like India, access to information can possibly enable better incomes and productivity to the farmers. This paper focus on group discussions and
in-depth interviews with farmers, has tried to find answers to the use and impact of mobile phones and mobile-enabled services on agricultural productivity. The answers to these questions are of relevance to develop better policy environment conducive for small and medium farmers and have implications for mobile phone operators, information service providers, and policymakers. The study has shown that although, mobile phones can act as catalyst to improving farm productivity and rural incomes, the quality of information, timeliness of information and trustworthiness of information are the three important aspects that have to be delivered to the farmers to meet their needs and expectations. There exist critical binding constraints that restrict the ability of the farming community to realize full-potential gains and it is more so for small than large farmers.

29) Krishnan Narayanan (2003), International Conference on the Convergence of Knowledge, Culture, Language and Information Technologies, SOCIO-ECONOMIC EMPOWERMENT THROUGH ICT EDUCATION: A COMPARATIVE ANALYSIS OF MAHARASHTRA AND RAJASTHAN IN INDIA, Convergences, Egypt:

Human development despite faltering economic development has been taking place in India, how much ever gradually, in many states. While the formal Government sector continues to play an important role, it is the growth of private participation in providing affordable computer education, especially to the socially and economically under-privileged that appear to have provided the impetus for growth in qualified professionals.

This paper argues that education and training in computer programme and packages at subsidized rates is likely to increase the capabilities for job-seeking, which in turn would change the socio-economic structure of the households whose members have been the beneficiary of such programme. The results of this study, which compares two Indian states representing the economically prosperous and under-developed, points out that computer education appears to have tremendous scope to enhance poor
people’s opportunities, and be a major source of empowerment of people – especially the socially and economically backward - in India.


Analysis based on models of (i) matching, (ii) network externalities, (iii) trade fragmentation, and (iv) resource supply on technological progress, shows that longer-term trends set in motion, from new technology enabled global sourcing, improve equity. Firms in emerging markets gain more access; labor markets become more inclusive. Global sourcing has the potential to raise the mobility and market access of virtual labor to match that of capital, despite continuing restrictions on migration. It makes a wider menu of jobs available to labor categories that were earlier excluded because of their higher transaction costs of reaching markets. It improves labor’s exit options and therefore bargaining power. Trade fragmentation or splitting of the production chain across countries reverses earlier tendencies for trade to be confined to countries with similar industry structure. Further induced technological progress reduces wage inequalities within and across nations. Government policy initiatives and firms’ strategies to boost and utilize these trends are examined.

31) Santanu Roy, Sunita Sharma and Vikrant Bhushan (2009), National Institute of Science, Technology and Development Studies, Modelling and Analysis of Indian Outsourcing Industry: A System Dynamics Approach, New Delhi:

India is emerging as one of the biggest markets for offshore services. Business process outsourcing (BPO) is the delegation of one or more information technology (IT) intensive business processes to an external provider that, in turn, owns, administrates and manages the selected processes based upon defined and measurable performance metrics. Offshore outsourcing is an umbrella term covering a range of IT and business
services delivered to companies in developed countries by personnel based in developing countries. Though Indian outsourcing industry is growing, the attrition rate is also rising in this sector. So is the backlash against outsourcing. In order to survive and grow in this scenario, Indian firms must ensure that their services are not only cost-effective but also qualitatively superior. The present study probes into these issues. The study aims to explore the structure of Indian outsourcing industry through the methodology of system dynamics. A system dynamics model has been developed, validated and simulated over time to understand the trends that characterize this industrial segment. The implications of the results of the study are discussed.

32) Sheshadri Chatterjee, Ranjan Chaudhuri (2010), Journal of Modeling and Simulation of Systems, A System Theoretic Analysis of IT/IS Outsourcing: A Case Based Approach, Hyper Sciences Publisher (Vol.1-2010/Iss.2), pp. 131-143:

The economic melt down in North America has taken a toll on most Information Technology/Information Systems companies in India. In response, Indian IT companies are looking toward untapped opportunities in other parts of the globe. The IT outsourcing market of Japan is the second largest market of world after USA. Based on a case study of a large transnational IT firm, this article examines the IT outsourcing process of Japanese firms and attempts to identify the lower level of Indian penetration to the Japanese IT outsourcing market using tools like SAP-LAP analysis, Porter’s five force analysis, Root Cause Analysis and SWOT analysis. Grounded in available knowledge on outsourcing relationship and process theory as well as a resource-based view of the IT resource capability, a conceptual model is composed to examine the causal structure of capability, process flexibility, and relationship in IT outsourcing. By proposing a framework lead through a case study, this article will assist management of Indian IT companies to obtain the most benefits from the IT/IS outsourcing market in Japan.

The Indian software exports have grown in spectacular fashion. Its success has, for the most part, been a combination of resource endowments, a mixture of benign neglect and active encouragement from a normally intrusive government, and good timing. The bulk of the Indian software exports have consisted of fairly mundane services such as low level programming and maintenance. The marked reliance on access to low cost human capital has prompted considerable scepticism about the ability of the Indian software industry to sustain its performance, given the rapid growth in the demand for engineers and the relatively inelastic supply of engineers. This paper reports on the results of research on the Indian software industry. We use a variety of sources, including a questionnaire survey of Indian software firms, and field visits and interviews with industry participants, observers, and US based clients. Although, maintaining the current rate of growth will pose a number of challenges, these challenges are not insurmountable. Not only can the available pool of human capital be expanded by tapping and training the very large pool of English-speaking college graduates, the leading Indian firms are making strong efforts to move up the value chain by acquiring better software project management capability and deeper knowledge of business domains, and reducing costs and improving quality by developing superior methodologies and tools. Moreover, the greatest impact of the software industry on the Indian economy may well be indirect, in its role as an exemplar of the new business organizational form and as an inspiration to other entrepreneurs.

In this paper use a variety of sources, including a questionnaire survey of Indian software firms, and field visits and interviews with industry participants, observers, and US based clients. The Indian software industry is remarkable in a number of respects. It is service ather than product oriented; heavily export oriented, and is largely managed by professional and entrepreneurial managements. Also, domestic market experience and expertise appears to have very little benefits for successful importers. Although the industry has grown in spectacular fashion, sustaining this performance will pose a number of challenges. In order to counteract the widely reported shortages of skilled software professionals and the possible competition from other low wage, human capital rich countries, Indian firms are trying to move up the value chain by acquiring deeper knowledge of business domains and management capability, and to reduce costs by developing superior methodologies and tools. Whether firms will succeed will depend critically on their management skills and willingness to invest along a number of dimensions. From a social perspective, the disconnection between domestic and export markets is a major challenge, but one that the growing diffusion of computers and the improvement of the communication infrastructure should make easier to confront. In the end, the greatest impact the software industry is likely to have on the Indian economy is indirect, in its role as an exemplar of the new business organizational form and as an inspiration to other entrepreneurs.

35) Rafiq Dossani (2002), Stanford University, Origins and Growth of the Software Industry in India, Asia-Pacific Research Center, Stanford:

The paper explains the evolution of India’s software industry. Domestic entrepreneurship emerges as the key factor for origination, survival and innovation in a hostile industrial policy environment. The maturing of the industry required a shift to a supportive government policy; maturation was also critically enabled by the modularization of the programming function through new technologies. These changes favored domestic firms that provided programming services. Later policy and technological changes induced transnational entry and led to higher value-added
output. The paper shows that technologically sophisticated industries can develop even when many conditions typically present elsewhere are missing. We provide conditions under which this may happen and show their effect on subsequent developments.


The growth of Indian software industry till date has been mainly due to the availability of highly competent and cost competitive software professionals in India. Software organizations, national educational institutes, corporate private training institutes and the central and state governments have been taking a number of initiatives to develop the human capital for sustaining the growth of Indian software industry. The paper examines these initiatives related to development of human capital and suggests further measures to be taken by different agencies.


The Growth rate of the Indian Economy was at its fastest pace in the fast 18 years during the financial year ended March 3 that was headed by a brave performance of its manufacturing and service sectors. The history of the Indian Economy shows that before the last decade India was probably on the short list of the countries which had the worst economic systems. At the time of independence the economy was predominantly agrarian. Although after that the Growth of the Indian Economy covering various other sectors made good progress. The rate of Growth of Indian Economy improved in the 1980s. Information Technology essentially refers to the digital processing, storage and communication of information of all kinds. Therefore, IT can potentially be used in every sector of the economy. The true impact of ST on
growth and productivity continues to be a matter of debate, even in the United State, which have been the leader and largest adapter of ST. India's software industry is, of course, more robust - at least in certain areas. While selling packaged software to consumer (and most business) markets requires economics of scale and scope, as well as marketing and customer support muscle, project-oriented components of software development do not do so, to quite the same degree. To some extent, therefore, India's software industry remains narrowly focused. In recent years, Indian Software Industry has boomed due to rapid increase in globalization. It has accomplished this growth by becoming an important part of the global division of labouring software. In particular, nearly two thirds of the revenues of the Indian software industry are from exports, with a much smaller domestic market. The talent pool of computer engineers is easing in quantitatively as well as qualitatively. According to NASSCOM figures, the top 25 companies accounted for 58.67 percent share of software exports revenue in 1997-98. Nearly one fourth of companies have safes of less than Rs. 10 million (about $250,000). Tata Consultancy Services (TCS) was the first firm to agree to export software in return for being able to import hardware. This study highlights the contribution of Software Industry in Growth of Indian Economy in the last decade. Indian Software Industry has boomed the growth rate of Indian Economy.

38) P S Kawatra, Neeraj Kumar Singh, 3-6 April 2006, E-Learning in LIS Education in India, Proceedings of the Asia-Pacific Conference on Library & Information Education & Practice in Singapore, School of Communication & Information, Nanyang Technological University:

Traces the history of e-learning to the learning age where knowledge will be freely accessed, profoundly abundant, and offered in cornucopia of formats. Distance learning has been accepted and recognized as a mode of education in LIS. The concept of open and distance learning is discussed. In the changing scenario of the society, the skills required of LIS professionals are also identified. The paper also examines the impact of the Internet on the teacher’s role and explores the types of skills and strategies that teachers will need to be effective and efficient in online learning.
environments. The paper provides an insight into the innovative multi-channel delivery modes adopted by the different universities and their effectiveness for the LIS distance learners. Guidelines for distance learning Library services approved by Association of College and Research Libraries on June 29, 2004 are also discussed. For assessment and accreditation of LIS distance education institutions in India, areas have been identified.

39) Karl L. Smart and James J. Cappel, 2006, Students’ Perceptions of Online Learning: A Comparative Study, Central Michigan University, Mount Pleasant, MI, USA. Journal of Information Technology Education Volume 5:

In search of better, more cost effective ways to deliver instruction and training, universities and corporations have expanded their use of e-learning. Although several studies suggest that online education and blended instruction (a “blend” of online and traditional approaches) can be as effective as traditional classroom models, few studies have focused on learner satisfaction with online instruction, particularly in the transition to online learning from traditional approaches. This study examines students’ perceptions of integrating online components in two undergraduate business courses where students completed online learning modules prior to class discussion. The results indicate that participants in an elective course rated the online modules significantly better than those in a required course. Overall, participants in the elective course rated the online modules marginally positive while those in the required course rated them marginally negative. These outcomes suggest that instructors should be selective in the way they integrate online units into traditional, classroom-delivered courses. This integration should be carefully planned based on learner characteristics, course content, and the learning context. For most participants of the study (83 percent), this was their first experience completing an online learning activity or module. In addition, the largest dissatisfaction factor reported among the participants was the time required to complete the online modules.
40) Ruth Barrett, Austen Rainer and Olenka Marczyk, 2007, Managed Learning Environments and an Attendance Crisis?, Electronic Journal of e-Learning Volume 5 Issue 1, ISSN 1479-4403:

A short survey identified a general unease among academics that these facilities adversely affect attendance and consequently student performance. The broader study, at a mid-point in an academic year, investigated relationships between attendance, performance in assessed coursework and students’ preferred ways of working. They found that students rated the contact time very strongly but placed most emphasis on carrying out work for themselves. There was a mismatch between many students’ perceptions of their use of the contact hours and the evidence from attendance records. Overall, our study sheds some light on the complex relationships between blended learning, student behaviour, attendance, and attainment.


In 2004 the Australian Flexible Learning Framework developed a suite of quantitative and qualitative indicators on the uptake, use and impact of e-learning in the Vocational Education and Training (VET) sector. These indicators were used to design items for a survey to gather quantitative data for benchmarking. A series of four surveys gathered data from VET providers, teachers, students and their employers. The data formed baseline indicators that were used to establish organizational goals and benchmarks for e-learning. These indicators were the first known set for benchmarking e-learning in Australia.

The case studies in this paper illustrate ways in which VET providers have approached e-learning benchmarking, the benefits achieved and the lessons that they learned. The cases exemplify how VET providers have adapted the baseline indicators, how the indicators informed organizational plans and e-learning outcomes. The benefits of benchmarking are categorized under three purposes: reporting, performance management, and service improvement. A set of practical strategies is derived from
the cases for consideration by other organizations interested in benchmarking e-
learning services.

42) Philip L. Balcaen and Janine R. Hirtz, 2007, Developing Critically
Thoughtful e-Learning Communities of Practice, Electronic Journal e-Learning
Volume 5 Issue 3, ISSN 1479-4403:

In this paper, an approach to developing critically thoughtful e-Learning communities
of practice where participants are deliberate about the use of specific intellectual tools
supporting critical thinking. Garrison & Anderson’s (2003) argument that such critical
thinking should play a central role within the ecology of e-Learning communities and
provide our view of what such communities might look like. To do this, they offer
four categories of strategies helping to develop such communities collaborative
agreement on goals; facilitator(s) modeling and teaching the tools supporting critical
thinking; and shaping communicative interactions within the e-Learning environment
to encourage thinking. Researchers provided examples from a current study involving
36 kindergartens to grade 12 teachers’ blended use of information and communication
technologies (ICT) and face-to-face sessions to illustrate our view.

44) Eunhee Jung O’Neill, 2007, Implementing International Virtual Elementary
Classroom Activities for Public School Students in the U.S. and Korea, Electronic
Journal e-Learning Volume 5 Issue 3, ISSN 1479-4403:

In today’s global society, individuals with an understanding of different cultures that
have the ability to apply this understanding to real world problem solving are more
likely to become leaders. Preparing students for a global society is becoming a
significant part of education. While many international online exchange projects have
been conducted at schools to help expose students to the world and experience
international collaborations, few studies have focused on both developing intercultural
competence for elementary school students and discovering practical ways of
implementing a cross-cultural exchange program into the public elementary school
systems as well. This study, International Virtual Elementary Classroom Activities (IVECA), planned to explore how American and Korean students can develop culturally meaningful interactions through asynchronous online communications in a content management system (CMS), Blackboard; and investigate the factors or strategies useful for integrating IVECA into public school curricula. Data were collected using observation and interview methods, and also included reviewing students’ journals. The data analysis involved interpretive analytic induction. Findings indicated that IVECA (a) promotes students’ intercultural competence; (b) developed their social interaction skills both in the regular classrooms and the virtual classroom; (c) facilitated diverse students’ motivations for learning at school; (d) enhanced writing and reading skills; and (e) engaged learning disabled students in the classroom activities. Additional findings from this study indicate that (a) a systematic support system for teachers’ technology use and instructional design is necessary, and (b) school administrators’ positive perception toward cross-cultural exchange activities and their coherent connections between state learning standards and IVECA objectives are important. Further considerations are addressed and the different influences of IVECA on the U.S. students and Korean students and its implementation.


Rapid E-Learning is an ongoing trend which enables flexible and cost-effective creation of learning materials. Especially, lecture recording has turned out to be a lightweight method particularly suited for existing lectures and blended learning strategies. In order to not only sequentially playback but offer full fledged navigation, search and inspection of the recorded lecture, chapter marks and search indices have to be embedded. To solve this, two basic approaches for lecture recording tools can be identified - both of them having certain advantages and drawbacks. On the one hand there are systems based on symbolic representation of common slideshow formats like MS PowerPoint. Therefore, they preserve structure and symbol information contained
therein, but are lacking flexibility of supported dynamic and interactive formats. On the other hand there are systems based on pixel representation and screen grabbing technologies. While supporting any presentation content, structural and symbolic information cannot be extracted directly and thus has to be post-processed from the recorded video. This paper discusses a perspective of combining these approaches by widening the slide-metaphor to a more flexible scene-based presentation, preserving both the structural and symbolic information. One possible attempt for this is identified by introducing a browser-based scene concept. Symbolic information can be directly extracted from the XHTML source code and structural information derives from switching through scenes. The browser itself is capable of presenting a wide range of dynamic and interactive formats, thus offering more flexible presentations. For approving the proposed concepts, a prototype called “Virtual Overhead” was developed and evaluated.

46) Ronald Robberecht, 2007, Interactive Nonlinear Learning Environments, Electronic Journal of e-Learning Volume 5 Issue 1, ISSN 1479-4403:

E-learning materials often have a linear design where all learners are forced into single-mode pedagogy, which is contrary to the interaction that occurs in face-to-face learning. Ideally, e-learning materials should be nonlinear, interactive, contain context-sensitive and active learning elements, and accommodate various learning levels and styles. This paper presents an educator’s perspective on approaches to designing such e-learning materials, which are essential to enhancing the education of future generations of students.

47) Mariana Lilley and Trevor Barker, 2007, Students Perceived Usefulness of Formative Feedback for a Computer-adaptive Test, Electronic Journal of e-Learning Volume 5 Issue 1, ISSN 1479-4403:

In this paper the report on research related to the provision of automated feedback based on a computer adaptive test (CAT), used in formative assessment. A cohort of
76 second year university undergraduates took part in a formative assessment with a CAT and was provided with automated feedback on their performance. A sample of students responded in a short questionnaire to assess their attitude to the quality of the feedback provided. This paper describes the CAT and the system of automated feedback used in the research, and also presents the findings of the attitude survey. On average students reported that they had a good attitude to our automated feedback system. Statistical analysis was used to show that attitude to feedback was not related to performance on the assessment (p>0.05). They discuss this finding in the light of the requirement to provide fast, efficient and useful feedback at the appropriate level for students.

48) Peter Micheuz, 2007, E-Learning in (Austrian) Schools Some Empirical Findings, Obstacles, Theses and Visions, Conference ICL, Villach, Austria:

Is E-Learning in Higher Education, the apparently cutting-edge place in applying and transforming the newest technologies in the educational field, already established and an indispensable part of teaching? The answer seems to be clearly Yes, subject to some constraints which are immanent to all (educational) evolutions. But does this apply also to secondary education, where the approaches to establish E-Learning in schools are even more multifaceted, accompanied by top-down and bottom-up initiatives as well? This paper highlights exemplary aspects of the current situation with respect to some empirical findings in Austrian’s secondary academic schools. Furthermore some theses grounding on realistic assumptions are put up for discussion.


This article provides a critical review of ICT and e-learning policy in the UK from the foundation of the National Grid for Learning in 1997 to the current time. It outlines
the key strands of policy and critically reviews the economic, political and social context in which policy has been formed and implemented. E-learning policy in the UK is associated with the large scale funding of projects, major curricular intervention and a teacher development programme which seeks to address the needs of all new and serving teachers. Perspectives on e-learning and their potential for leveraging positive change in schools equate directly to the interests of various stakeholder groups inside and outside the wider educational establishment and those who form a part of the broadly based 'community of practice' concerned with the use of ICT in schools. Much of the debate associated with applying ICT in schools has focused on the types of technology to be used, the degree of access to technology and the manner in which it can be integrated into current organizational frameworks. This article seeks to focus attention not on the technologies which have flowed into UK schools but on the issues which have comprised the policy environment and have significantly impacted on the degree to which e-learning initiatives have achieved the 'transformation' predicted when the foundations of the National Grid for Learning were laid.


The government of Egypt has devoted substantial resources to the area of educational technology in recent years. In order to provide the growing population of Egypt with quality, accessible, and numerous educational opportunities, both the government and the private sector are willing to develop alternative programs and delivering methods. The Internet is unquestionably an exciting medium for the delivery of educational content today. However, there are factors built into the Internet as it now functions that clearly limit the richness and depth of what an instructor can offer his or her students. This paper explores how CD-ROM technology can be used to augment e-learning courses.
Books: -

1) C Bhattacharjee (2005), Service Sector Management: An Indian Perspective, Jaico Publishing House, Mumbai, ISBN: 817992212X, 9788179922125:

This book is designed to provide a mature, in-depth treatment of service sector management with an Indian. The text unfolds with a concise, practical and unified presentation as to how and why the concept of service started, how competition has changed the face of service jobs and how service has played an important role in industry. It provides guidelines as to how to use service as a crucial marketing weapon and a strategy. It also highlights the powerful marketing model and the game of promises that service marketing is all about, and the uniqueness of service quality standards. The content also emphasizes customer satisfaction which in turn leads to customer retention.

2) Vahid Rangriz & M. G. BasavaRaja (2012), Information and Communication Technology for Small and Medium-Sized Enterprises, Global Research Publication's, New Delhi, ISBN: 9788189630568:

We are pleased to bring you this book of information and communication technology (ICT) for small and medium-sized enterprises (SMEs). In our present era, ICT has taken the stage as a necessary ingredient in education, manufacturing, and even research. Individual involved in researching, improving, and using SMEs need a strong resource to provide ideas and information on the utilization of these new technologies and what possibilities SMEs offers. Information and communication technology for small and medium-sized enterprises presents a wide range of the most current research in the adoption of SMEs. This book will assist researcher, educator, and professionals in understanding the necessary components for ICT and how to best adoption these elements into their classrooms, workplaces, and organizations throughout the world.

The book on “Twinkling Thirty–Commerce and Information Technology” {Collection of Research Papers in Commerce and Related Subjects}, is the author’s painstaking effort of research for the past ten years, on various current topics based on field study. The papers included in this book are grouped under seven major heads. There are altogether 30 papers in this book. The first group, related to Global business, contains four papers, which brings out the Accounting for globalization and its impact on corporate reporting, Business process outsourcing, GATT and its impact on banking services in India and Globalization and recent trends in banking. Marketing, Second group, encompasses three papers, dealt with Purchase decision and consumer behavior, marketing of leather products and Consumer’s view on petrol prices. The third group, Service tax in India and Value added tax is included under the head, ‘taxation’. The fourth group, ‘Insurance’, included LIC in rural India, LIC in global era, Impact of LPG on the life insurance sector and the Indian insurance: Modern marketing approach. The fifth group, ‘Agriculture’, contains No loss in agriculture–a case study, Plight of landless poor in Tamil Nadu, Role of youth in forestry and Grow more trees. The sixth group, ‘Co-operation’, includes performance of industrial cooperative societies in Tamil Nadu–recent trends and women empowerment through co-operative societies. The final seventh group, ‘General’ enclose eleven papers like Pollution control, Secret of success, Move with the world-changes imminent in commerce education and curriculum, All India services-past, present and future, Tourism development in Yelagiri hills, Railway pioneering institute, Socio-economic conditions of tribal’s in Javadhi hills, Power of women and the achievement of women entrepreneurs, Mutual fund industry in India, Information technology and electronic commerce and women empowerment through Self Help Groups. The papers deal with current problems and they are written with simple and easy to read language. The book would be of immense help to academicians, researchers, executives, administrators and students.
4) S A Senthil Kumar, Lalitha Ramakrishnan (2012), Emerging Paradigms in
Insurance Industry and Management, Serial Publications, New Delhi, ISBN:
9788183874878:

Liberalization of Indian economy has opened the boundaries for free trade, including
services sector especially, the insurance sector, and a lot of new players, both
multinationals and Indian companies with foreign collaboration, have entered this
arena realizing the vast potential in insurance industry. Since insurance is an emerging
sector in India, a basic knowledge of emerging paradigms insurance and management
has therefore become essential for the students opting for this course as well as for the
practitioners. With this view in mind, the authors present this edited volume with a
holistic view of every dimension of insurance management in the sequence of life,
general, health, miscellaneous and insurance management. Key Features • Separate
chapters are devoted to each sub-discipline of insurance such as life insurance, general
insurance, health insurance, miscellaneous insurance. • A separate chapter is given for
insurance company management in which all the management related functional
applications applied to insurance sector is discussed. This book is primarily designed
for students of management, commerce and those pursuing specific insurance courses
and also for research students who pursue M.Phil., and Ph.D., with insurance as a
research topic. It can also be profitably used by industry & practitioners. Finally, the
book will be invaluable to managers of Life and General Insurance companies, Banks
(engaged in Bancassurance), and Security firms.

5) Dr. Jayasheela, Dr. V.B. Hans, Dr. Ravindra Kumar B., Dr. Vilas M.
Kadrolkar (2012), Service Sector in India: A Sectoral Analysis, Global Research
Publications, New Delhi, ISBN: 9788189630539:

Service sector has been accorded as one of the important sector in the Indian economy.
The contribution of the services sector to the Indian economy has been manifold: a
55.2 per cent share in gross domestic product (GDP), growing by 10 per cent annually,
contributing to about a quarter of total employment, accounting for a high share in
foreign direct investment (FDI) inflows and over one-third of total exports, and recording very fast (27.4 per cent) export growth through the first half of 2010-11. Further, the sector has been witnessing unprecedented opportunities and challenges which would make the nation towards the path of growth and sustainability. Keeping this in view, the present book contains the various issues of the service sectors and in this direction the gathered articles have reflected on the perspective of service sector which deserves to be explored for further academic analysis.


The book is a timely publication of sixteen multi-disciplined research articles so judiciously selected by the editor for the benefit and information of students and research scholars on various aspects of Business Management. Contributors of the articles are established authorities and uniquely specialize in their concerned field of study. The contributors belong to national and international forum. Many published were presented at international seminars and contain latest researches information on the subject which can benefit all research scholars. As is wisely said that articles are the forerunner of the books since they contain novel new information in them These articles study many interesting aspects of Business Management eg. Status and impact of IT-Applications on Business Performance: a study to SMEs of Chandigarh and Mohali region, India, Design of Data Warehousing using the Entity Relationship Model in Business Environment, Regulatory Challenges Strategically Enhance Banking efficiency and Stability, A note on the law of Capital markets, Social empowerment of Working in Bangladesh, Is Inequality Harmful for Botswana’s Economy, Growth, Mutual Fund Schemes in India-Can they protect the interest of the retail investors, Indian Strategies for Global Competitiveness, Onslaught of Global Brands, Indian Brands fights Back, Governance Challenges in India-a perspective, Corporate Governance and its Possibility for Business Practice, An alternative Energy-A Comparative Study of E-Bikes and Petrol Bikes, Strategic Management of Manufacturing and some issues, Commercial Mortgage Market of the United States:


The present book is result of an outcome of the effort from the proceedings of a today Seminar on “Management Challenges Emerging Service Economy of India” held under the author’s directorship. The seminar was sponsored by UGC and was held at School of Business Management, Sri Venkateswara University, Tirupati, Andhra Pradesh. The theme of the book is as follows: Indian economy is today dominated by Service sector in terms of GDP and organized employment opportunity. Yet India is considered to be a laggard in this sector as the reasons may include, among many huge and silent crisis of unemployment ever since 1991 opening up of economy. India, which is striving to break the age old bondage of man to misery, want and destitution, must understand the basic problems of organizing people of diversified and highly advanced skills and judgment to overcome the twin challenge of liberalizing and globalizing economy. The role of government and political organizations on the sustenance of prosperity of service economy needs to be understood and reviewed is their functioning vis-à-vis various service organizations. The book has been organized into eight distinct sections keeping the theme and overall diversity of the available papers. It is expected to open up and serve an important area of the gap of knowledge with regard to unfolding service economy of India.

8) Marc Jeffrey Rosenberg, 2006, Beyond E-Learning, Pfeiffer: San Francisco, ISBN 9780787977573, 0787977578:

Beyond E-Learning takes you on a journey from where we are right now to where we need to be. Although we begin with considerations of E-Learning and learning technology, we end focused much more on performance. The first of three parts “Beyond E-Training,” begins with a realistic assessment of the current state of E-
Learning. Part two “Beyond the Classroom,” showcases many new non-training approaches that expand the notion of E-Learning, learning in general, and performance improvement. In part three “Beyond Learning,” the book describes several cultural issues you must take into consideration if you want your efforts to be successful and sustainable. Throughout the book are woven stories of how organizations are using new technologies and new approaches to learning to extend their reach and impact beyond the classroom.


The content of this guidebook is organized under several key chapters. Each chapter approaches its content in a similar manner. Each comprises a discussion of key principles and procedures, which are interspersed with a number of critical questions for you to reflect upon. A unique feature of this guidebook is the opportunity it offers you to tell your own stories. We all have stories to tell, which we often do through our books, movies, drama and music etc. Stories comprise a powerful form of communication. I believe that a good story can engage readers in many ways and beyond what I may have imagined. I also believe that teaching and learning can be significantly enhanced with storytelling.


As usual in the past surveys, the tips range in length from one-sentence ideas all the way up to page-long discourses. Some are very basic in nature, and others are quite advanced. The Guild did not edit the tips in any way, other than to correct spelling – everything you see in this book is in the tipsters’ own words. As a result, these tips will be useful to any designer or developer looking for best practices to incorporate into their own production process. The process of turning these tips into an organized collection began by simply separating the tips into the five major categories of the
survey. The largest group is the tips for authoring and development tools. The smallest group is the nine tips on using media tools. Next, in the book it tried to sort the tips in each group into sub-categories that would help readers locate the ideas of most interest to them. They were able to do this for three of the five groups, but the two smallest (media tools and simulation tools) are presented without any kind of categorization. They followed each tip with a number indicating who contributed it, and an indexed list of Tipsters appears at the end of the book. This may help you to contact Tipsters for additional information. A few tips were contributed by “Anonymous” but in most cases, you will now who provided the idea.


This broad-reaching collection of essays on e–learning examines accomplishments, new directions, and challenges from many perspectives. The essays are arranged in categories, which include e–learning and e–learners, teaching and instruction, student engagement, learning communities, outcomes assessment and institutional leadership, all of which relate to learners and programs from college, K–12, career, to corporate training. Of special interest is a focus on successful outcomes for students and programs, and essays on often–overlooked niches of learners, including generational differences, stay–at–home mothers, working mother e–learners, homeschoolers, bilingual online education and training.