CHAPTER VIII

Conclusions

(1) Computer Industry Scenario present and extrapolated position

(2) Career Planning for students

(3) Computer Science and IT Sector

(4) Industry Institute Interaction

(5) Services of the Examining Boards to help people and business to grow


(7) Personality development of graduates and schoolgoers

(8) Demand and Supply Equilibrium Employment Generating Base
(1) **Computer Industry Scenario present and extrapolated position:**

<table>
<thead>
<tr>
<th>Particulars</th>
<th>As on 31(^{st}) March, 2006</th>
<th>Extrapolated till 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal computer</td>
<td>1 Crores</td>
<td>6 Crores</td>
</tr>
<tr>
<td>Computer Users</td>
<td>7 Crores</td>
<td>30 Crores</td>
</tr>
<tr>
<td>Cable / TV Users</td>
<td>10 Crores</td>
<td>45 Crores</td>
</tr>
<tr>
<td>Telephone Users</td>
<td>11 Crores</td>
<td>40 Crores</td>
</tr>
<tr>
<td>Volume of Computer Business</td>
<td>60,000 Crores</td>
<td>12,50,000 Crores</td>
</tr>
<tr>
<td>Share in the exports</td>
<td>25%</td>
<td>40%</td>
</tr>
</tbody>
</table>

For a multi-faceted personality, Consultancy Organizations like Tata Consultancy Services offer a Global Career which is always on the more in a dynamic team environment fulfilling personal and professional requirements. They give opportunity to graduates in engineering, technology, computer applications, CAs, ICWAs and MBAs in the various skill categories like web technology, business intelligence, knowledge management, EAI (Enterprise Application Integration), Document Management System, Client Service, IBM maintenance, SAP People Soft (Finance, CPM, HRMS). Tata Consultancy Services are looking for Team makers, team leaders, project leaders, Project managers for their Delivery/Solution Centers.

In order to elevate oneself above average, the employer is willing to provide training to persons having managerial and technical brilliance in computer science, electrical, electronics or telecommunications degree from a premier engineering and management institutes complemented by at least three year's experience in industry-research and academics or a Masters' or Doctorate Degree even without prior experience. What is demanded by the employer is research mind, excellent analytical ability superb communication skill. Employers are willing to provide a working environment with maximum freedom to grow and freedom to do more by listening, understanding, inventing and exploring innovative ways of performance which is 'result-oriented'. In the context of data base technology, persons with elevated personality can be absorbed as service managers with IT experience and senior S/W engineers, S/W architects, S/W developers and Team head S/W developer.

In case of personality of a computer gem, it can be said that he/she is 'born' and not necessarily made by formal education in a faculty of a University or school. Computer knowledge can be acquired by formal education and skill in computer.
application can be acquired by practice. However, a computer-gem is born and self-made. This is irrespective of whether he is a graduate or undergraduate. Therefore, a lucrative opportunity in the computer field is not necessarily denied to a person who does not possess a degree or diploma certificate. The approach of the employers recruiting computer people by direct interviews or through consultancy organization is that provided a computer gem with the necessary skills in computer application and he proves his innovative capabilities 'on the job' his/her chances of getting selected for the job are almost certain. Moreover, while employing him/her as computer programmer he/she is given the assurance of good prospects in respect of monetary rewards as well as rise in position in the hierarchy. Educational institutes on the other hand are keen to look after multidimensional personality development of the 'product' they are offering to the prospective employers.

In fact, in the case of many a candidate aspiring for a good lucrative job there is an illusion that they possess a good qualification (a Masters' degree in a faculty) and still to their surprise they get an answer from their prospective employer, "I am sorry but you are too qualified for the post". The implication of this answer is that possession of too much knowledge can actually be a road block in the job hunt by rendering one 'too good for the job' (This stand of the employer throws light on his attitude to HRD that he is not interested in the degree or a certificate held by the would-be employee - what he wants is the operative skills) meaning, too much of theoretical knowledge may lead to confusion in a mind of a candidate thereby rendering him useless for drawing conclusions which are instrumental in solving practical problems. A highly 'knowledgeable' person may not necessarily be result oriented. Only a person (whether he is graduate or under graduate or school thrown out) who has the inquisitive mind, capacity to ask questions to himself and answers them on his own can contribute to 'concrete' results can attract the employer.

In testimony to this fact, I came across an undergraduate who was accepted by the employer (who said to him, 'I am not interested in your certificates- please sit at the computer table and demonstrate how you would go about to solve our problem') immediately and also will an apology-considering your skill and innovative approach, we are aware that we are paying you less - however, on trying you for the job we promise to pay you more and the employer honestly kept his word.

(2) Career Planning for students

The fundamental factor which is congenial for career planning of students belonging to any faculty is that, there is coherence in the progress of different faculties like arts, humanities, commerce, management, engineering and information technology. There are more over other cohesive developments in the macro-environment. Construction engineering and manufacturing industries are developing and they have created a typical corporate culture. Entrepreneurial developments in the small scale sector are also significant in view of the attitudinal changes towards personality development.

Engineering touches every facet of every minute of everyday life and different dimensions of business administration. viz. e.g. production, personnel, marketing and finance. Recruitment sector has been booming like never before during the first time years of 21st Century. Consequently, career options are boundless. While jobs are plenty in the corporate sector. Engineering graduates and graduates in other faculties go in for IT careers. What is needed is proper binding of career.

Modern education is becoming a new medium of outsourcing and India is ahead in this educational revolution. Through the electronic medium the world has become closer. Companies like futurvista and Dot Com have been helping tremendously the multi-faceted personality development of aspiring student. The monetary charges in India are comparatively less. The students in the foreign countries are also getting attracted in educational institutions like international School of Bangalore. The curiosity about the Indian culture and Indian people have started growing among the foreigners. India has started gaining the starter of super power in IT industry whose benefits should get percolated to the lower strata of Indian society. If there is functional decentralization of industrial activity, career opportunities can transmit from urban sector to the rural sector. E-government can facilitate this welcome development by spreading the benefit of IT to the remote areas with high degree of potential for development. Potential for development can be explored and exploited by polishing the resources. In respect of careers in construction, engineering and manufacturing Mr. Kunal Gupta remarks* that "the training and development functions in manufacturing firms is said to be the most critical one and assists in providing a smooth transition from fresh engineers who joined this industry.

*Ref: "His article in polishing the resources Times of India dated : 28th March, 2007."
For successful performance of this function automation (which makes lives fast and easier and intelligent in infrastructure) are the facilitating factors. The basic thing is that people (manpower and womanpower) are greatest assets and they are the foundations of growth and success from engineers to surveyors, from finance executives to marketing professionals, only those who show passion, skills, integrity and commitment are welcome by industry and the corporate culture.

(3) Computer Science and IT Sector

Computer science is the parent of IT which has become overwhelmingly pervasive. When knowledge of computer science has become correspondingly hard to find the CS, educational institutions have shifted focus from the core science and have become specialty providers, professionals for IT industry for or else mass producers of those who are vocationally trained personnel. There are few institutions which emphasize the pristine science underline the diverse of computing and the several ways of presenting the canonical core computer science. They develop a distinct style and method that bridges the theory practice divide because technology changes rapidly especially in the field of computer and science and also gradually changes, persons who are clear about the fundamental can easily adopt themselves with the changes in technology. Education that becomes the basis of lifetime of learning. Professionals can be produced for meaningful career in the country and abroad. These professional excels are the highly competitive industrial environment.

Few educational institutions imparting pristine computer knowledge which is primitive and obsolete. Consequently, they have become specialty providers of professional possessing the necessary expertise acumen for result oriented constructive computer technique and its application. As counterpart of this process, IT industry is also in search of persons with innovative skills in computer application. Thus, demand for and supply of computer professionals are not mutually exclusive but mutually consistent process responding to each other in a reciprocal manner.

The fundamental principle behind this development is that: Learning is a continuous process and does not end with the acquisition of degree. Especially because steady and rapid advances in computing technologies shorten the life of tools and techniques prevalent today. Therefore, educational institutions have not aimed to make students walking manuals of any language or package. Instead they are given a strong foundation in computer science and problem-solving techniques and are made adoptable to changes.
This approach of teaching-learning coupled with practical experience gained during Industrial Training from reputed organizations help to equip students to handle the challenges possessed by software industry.

This stands testimony to the fact that teachers and professionals from industry in the field of commerce and management education have the necessary foresight and insight into the necessity of computer education, undergraduate and the graduate level and having being making sustained efforts deviate Departments of Computer Science on par with IITs. To do this, they induced prospective students to go in for their Master's programme in Computer Science.

They regard bright students' as their inputs and shape their problem solving skills by teaching problem abstraction and modeling techniques targeted towards elaborate programming solution for problems. Computer students consequently come to acquire problems ability that distinguishes them from other graduates, computer students and computer fundamentals like (OS, DBMA, Networking, etc.) These students are not just technology savvy educated by the IT schools but students having broad spectrum adaptability to new technologies in computer programming and the required skill-set.

Obviously and consequently, such alumni have been placed by companies on important responsible positions.

(4) Industry Institute Interaction

Industry institute interaction is a reciprocal process leading to grooming of candidates for computer career. Industry institute interaction is a factor responsible for synchronizing demand for computer careerists and their supply from educational institutions. Both the employers and the leaders of educational institutions are in constant contact with each other and deliberate efforts are made constantly in the form of campus interviews, seminars, conferences and lectures by experts so that right persons are chosen for right jobs. The enthusiasm showed by the employers, educationists and students is commendable. Collaboration agreements between industrial employers and educational institutions are forthcoming and materializing for promoting professionals. Professional approach is a must for development of an individual, an institution and industrial activity. For example,

**Industrial Collaboration for grooming Professionals**

University of Pune, MCCI/ISO-9001 organization and Bharti Vidypeeth have collaborated themselves for encouraging learning for development of work and for bringing about industry-institute partnership. They have taken the initiative
in organizing congenial programmes for growing professionals. The programmes have been launched and are supported by the UGC and Department of Education leading to establishment of Departments of Computer Science having a distinct position in the educational setup. The Department of computer Science focus their attention on Post-graduates academic programmes oriented towards growing of well-qualified computer scientist and professionals. The activities of the Universities and computer management Institutes have been awarded 'distinct status' by the National Assessment and Accreditation Council and work as autonomous agencies of the UGC.

The important aspect of academic and ex-curricular activities of these agencies for growing professionals are -

(a) Programming intensive curricula
(b) Computer library, well equipped with books is a cutting-edge. Technology and collection of texts and reference books comprising not only of books or computer science but of philosophy and history of computer science, the social sciences and humanities.
(c) Development of students study habits both written and oral outside the syllabus.
(d) The visiting faculty facilitating the teaching and learning process bringing the students to diverse perspective of commentary industrial priorities and practices.
(e) Participation in educational process of eminent persons occupying senior positions in industry.
(f) Computer Associates offering their concrete support in the form of open source data based (like example “Ingres Million Dollar challenge) and rewarding outstanding programmes
(g) Heads of Department inviting potential employees form a judgment on the quality of their educational activities, details of the revised curriculum and student profile and to form accordingly their campus recruitment programmes.
The services of the examination boards is to enable aspirants gain and to support high quality vocational qualifications for customers for meeting their time to time demands. This can be done by achieving internationally recognized qualifications in the following areas-

(a) Financial qualifications  
(b) Business English  
(c) International Languages  
(d) Marketing (research and skills)  
(e) Customer Service  
(f) Information Technology  
(g) Travel and tourism  
(h) Secretarial skills  
(i) General Business Expertise

Examination boards for this purpose are offering courses in different disciplines and a definite pattern of examination and certification. Concrete plans must be prepared to support training centers and students commonly. Accordingly the format and contents of these courses are -

1) Financial Qualifications
   • Book-keeping
   • Book-keeping & Accounts
   • Accounting
   • Accounting (Indian Accounting Standards)
   • Financial Accounting
   • Financial Accounting (Indian Accounting Standards)
   ➢ Cost and Management Accounting
   • Cost Accounting
   • Management Accounting

2) International Languages
   • French
   • German
   • Spanish
3) Marketing
   - Advertising
   - Public Relations
   - Selling and Sales Management
   - Internet Marketing
   - Website Design
   - Advanced Website Design
   - E-Commerce
4) Customer Service
   - Customer Service
   - Call Center Operations
5) Information Technology
   - Information Systems for Business
   - IT Users(UK) only
   - Keyboarding Speed Test
   - Using the internet
6) Secretarial Skills
   - Audio Transcription
   - Text Production
7) General Business
   - Business Administration
   - Business Practice
   - Meetings
   - Business and Industrial Administration
   - Principles and practice of Management
   - The Legal Environment

The Information Technology Management explains and gives examples of the concept of an information system. It identifies the major types management information systems and discuss and how each supports the managers of an organization. This management tries to demonstrate the ability to use some basic systems development in order to apply information systems to business problems. It explains the benefits, limitations and trends in major types of computer system and peripheral devices.

Likewise, if we take the example of strategic management, it covers the concept of corporate strategic planning, the role of the strategist, strategy formation and evaluation, strategy implementation and also covers organizational context and their relevance for strategy development and implementation.
In International Marketing, the students can get expertise knowledge in developing marketing strategies for countries other than their own and thereby extend their range of marketing understanding both to deal with international marketing situations in non-domestic markets and the impact of international competitors on the domestic market.

Apart from the above syllabus in the Business Administration course, the students are also getting the practical experience of doing project work, arranging seminars, workshops in different subjects, project reports to built the expert knowledge capacity.

So, this new changing curricula of Business Administration includes different areas from where the students can be able to update their knowledge in their day-to-day life along with practical experience. Not only knowledge but also actual application, administration and management becomes easy for them and helps to learn difficult aspects in administration and management.


In the effort to safeguard the vested interest of capital, it would be unjustifiable, illogical and incompatible to pursue an employment generation policy which is submissive. More so when it is officially expected and declared by the president that by 2020 the growth rate of GDP would be 6% to 7%. The upper middle class would shine in India which will be recognized as a 'Developed Nation' in the global context.' Job Opportunities for all 'should be the motto and IIPM experts taking seriously about realization of President's dream of jobs for all advice Government to create employment in traditional small scale industries, village industries, in addition to agricultural sector, processing, fisheries, animal husbandry, poultry, etc. 7.60 crores of jobs could be created by investment of capital to the extent of Rs. 1500 millions. This is the main area of Governmental expenditure (wherein private sector will not like to enter) where gestation period is long and profit earning in the short run cannot be the objective of economic activity of the welfare state of India. This implies not only controlling utilization and the rate of increase in money supply but also harnessing and regulating it for creation of employment opportunities in certain sectors on priority basis. Employment generation and growth in computer science sector are interwoven.
Educational Policy of Government

An important and relevant policy change in the educational policy of Govt. of Maharashtra as indicated by a news-item is revealing Govt. of Maharashtra has provided Rs. 2 Crores for implementing a scientific action plan in respect of providing computer education to students waiting to acquire degree (through ‘traditional’ formal education) in the faculty of arts, science and commerce. Computer training for minimum 100 hours has been made mandatory (as eligibility condition) for appearing for a degree examination of the University. This is an effort in providing ‘quality education’. This decision taken by the Maharashtra Government was officially declared by Dr. S. N. Pathan, The Director of Higher Education. This policy will be implemented right from the stage of first-year of a degree course where in computer training will be run as a parallel course. In order to enable the government and aided (granted) Colleges to run the Computer course, suitable grant will be provided for the purchase of computer equipment and salary for the computer trainers (Rs. 50 lakh for 29 government colleges in Maharashtra) about a lakh graduate students under traditional education will be covered by the new educational policy. This is according to the recommendations made by Patil Committee (under the Chairmanship of Prof. N. D. Patil).

(7) Personality development of graduates and schoolgoers

Performance in the 10th and 12th std. examination cannot be the only criterion for making a significant successful career. Similarly, undergraduates cannot be a bar to ‘grooming’ a significant career. Apart from academic excellence in a particular examination the other aspects of personality development (which were not regarded important for getting a clerical job in government during the British Rule) and the specific psychological set up of the students and their potential in the various areas should be taken into consideration. A career is not to be ‘imposed’. There are instances of students who continued to fail in the routine examination, as a part of ‘formal traditional education but as computer brains’ they have become owners of their own computer unit employing graduates in their organization. Then everything comes to fundamental change in priorities and values.

A survey of School going children conducted in Delhi has made many important revelations useful to the parents of School going children. The educational system for the school going children is characterized by the following realities:

1) *Ref. - News - item - A local newspaper SAKAL Dt. 4th July, 2004.*
What would be your advice to the young careerist in future?

2) *An article on “ग्राजुएल अथवा अधिक कुछासे मान्यता करोगू” - By Mrs. Shobha Bhagwat - SAKAL - 6th March, 2005.*

(223)
(a) Heavy burden of study and study material
(b) Unusual tension about examination to which 70% of the students (210 out of 300) were subjected by teachers and parents.
(c) Frustration and tension destroyed creative free mind of students.
(d) Highly commercialized and financially costly education.
(e) Market economy creating undue tension for career (tuition) and professional courses.
(f) Confidence destroyed by frustration, boredom and "markist" approach.
(g) Total neglect of many other non-academic aspects of student's personality e.g. curiosity loss of independent thinking by stereotype questions and answers.

Many students passing 10\textsuperscript{th} or 12\textsuperscript{th} standard examination with low percentage of marks get frustrated without knowing other aspects of their potential, leading to creation of inferiority complex and stagnancy. Students undergo studies under parental pressures, peer-pressure, social pressure and academic pressure. Consequently, they cannot become what they want to become. In other words, the educational, social, economic factors fail to know student's natural aptitude and their IQ in the fields other than the field set for them by others and their ability to comprehend, interpret, ability to take practical decisions independently are jeopardized. This points to the need for adoption of positive non-traditional approach to student-education by parents and the educational system in vogue prospects in computer career would depend on computer ingenuity acquirement of knowledge and occupational skill, consistent efforts to keep oneself update and experience of computer service in specific fields. The concept of educated retirement from service with lose relevance and everyone have to adopt result-oriented productive life style. Inefficiency procrastination, stagnated customer service will have no place in the case of persons in the computer service industry. India's and Indians place in computer industry, Indians have gained grip and supreme command over the computer service industry at the international level. Indians are known by the titles 'IT and Beauty' Cybenotis indicates communication and automatic control system enabling leadership of a group or a team. Indians can provide such a leadership.

(8) Demand and Supply Equilibrium, Employment Generating Base:

Employment opportunities are created and aspiring candidates get lucrative jobs and prosperous career, when the 'product' demanded by the employer is the same as the product groomed by educational institutions (schools, colleges, universities, private coaching classes and management institutes). In other words, employment generating environment and trends are created. A review of these trends stands as a proof of this congenial development at the micro-level and macro-level.
The various developments during the first five years (2001-2006) on the demand and supply side of employment generation for computer aspirants point to a significant and positive development. On the one hand, the demand for computer careerists (Indicated by the recruitment schedule of the employer) has been consistently rising. On the other hand, (the supply side) the grooming of the 'product' - the computer operating engineers, programmers possessing the required operational skill (computer application) has been taking place according to the requirements indicated by the employer in their advertisement and on the campus interviews. The suitable industry, institution and interactions has facilitated the process of making good job opportunities available to the aspiring innovative and qualified candidates. Sky is the limit for imaginative and creative individuals irrespective of whether he is a graduate or under graduate or a school-thrown-out. The importance of traditional education has been reducing and giving place to more liberal and technology oriented education.

Job oriented courses are available like MS-Office, DTP, Tally, C, C++, Oracle and VB, Java, Auto cad Web development. Institutions running these short term courses are supported by government, semi-government, private bodies, banks and research organizations. Between the men and women careerist, women's status has been elevated in many areas of business administration, marketing and finance being the major areas.

The educational institutions like colleges, Universities and Management institutes have changed their curricula to suit the needs of recruiting employers. The 'product' of the institution is so groomed as to meet the employer's demand for young graduates, professionals, computer programmers, scientists and research workers. Thus, the potential for individual's all-round personality development is being explored and exploited by the educational institutions and employers by having a dialogue in their mutual interest and for the mutual benefit.

In the field of Business Administration and IT industry status and profile of students aspiring for computer-career (MBA IT status) has undergone a radical change. Every student activity (conferences, seminars, industrial visits) reading, writing and arithmetic (the three Rs) has been expanding for getting recognition at the national and international level. This is the most significant in the context of globalization. Students belonging to various faculties like MBA, MCM, MBA systems are giving result-oriented performances at par excellence. The orientation of the HRD policies is towards encouraging such performances, recruiting and promising the youth for developing manpower for the company by reducing the mobility of the staff. Apart from building stable human force of qualified staff the HRD policies are so formulated as to promote the staff and give them sumptuous financial rewards. Adequate monetary and non-monetary incentives are an important aspect of the HRD policies of the employers. One has to hope piously that, this atmosphere for employment in IT industry lasts for a long time.