CHAPTER - I

Introductory

1) Importance of the problem under investigation and the background.

2) Objective of the Ph.D. Thesis (Based on the review of developments in 21st Century)
The vital importance of all round and integrated personality development can never be denied or neglected in the life of an ambitious young student who aspires for continuous progress and prosperity in his or her own life. All round personality development and career planning are the fundamental needs of the hour. Development of computer technology, its application and the new information technology have drastically changed the ways of life in its multifarious aspects. They have also changed the fundamental processes of learning and earning and have posed new problems and challenges in -

(a) Individual Development
(b) Professional Development
(c) Social Development, and
(d) Educational Development (the process of teaching and learning)

Development in Computer science and information technologies is very fast and continuous and any knowledgeable person has to cope with these developments for his survival in the competitive world. Knowledge is now available not in the classrooms where educational dialogue takes place between the teacher and the taught. By the end of the year 2002 almost the whole world is knit together and has become a "World Village." There will be neither political nor geographical obstacles coming in the way of this process of integration of the world economy. In the field of educational progress the traditional method of one way dialogue between the teacher and the student has become obsolete. As a result of highly sophisticated developments in computer science and information technology, volumes of information leading to acquisition of knowledge are easily available to an inquisitive student independently of availability of another senior person imparting knowledge through oral instruction. In order to encourage and facilitate this healthy process of self education and self employment, many educational institutions have been coming up during the last two decades (1980 - 2000) and have changed their circular and extra-curricular image so as to suit the new educational process enabling the student to face new challenges in career planning. Universities have been giving permanent affiliation to the new engineering and computer management institutes.

These institutes have evolved new courses in computer science, programming and information technology in the various branches of knowledge (such as bio technology, hotel management, fashion
photographies, computer application, information research, fire engineering, industrial safety, etc.) in order to provide quality education to the new generation of youth aspiring for a meaningful career in their life. They have also organized profession-oriented programmes and exhibitions in order to make students knowledgeable about the vast fields and avenues open to them in their career planning. These programmes have increased exposure of aspiring students to challenging situations.

Government policies also are changing suitably to help and expedite these processes in educational developments. For example- as the latest News goes- Government of Maharashtra has established Maharashtra Knowledge Corporation Ltd. (MKCL). Such a high-tech initiative to create a new education paradigm based on learning technologies is a welcome development relevant to a knowledge-knit and knowledge-lit world.

Government of Maharashtra is planning to offer e-learning services to about one million students learning in over 2000 institutions of higher and technical education in Maharashtra as well as the community at large. MKCL, for this purpose is networking these institutions through its portal and creating Network Access Centres (NACs) at all the institutions with the latest computing facilities, broadband connectivity, rich interactive content and a variety of e-learning services. As a first step in this direction, MKCL is launching IT literacy drive in the form MS-CIT course, which is being offered at over 1300 centers across the state in collaboration with empanelled Training Providers.

These developments not only would pose new challenges but also create new career and employment opportunities to the younger generation of 21st century. In the field of education and technological employment ways should also be found out to synchronise and balance the processes of demand and supply when new employment opportunities are generated as a result of multiple computer application. Knowledgeable persons proficient in computer application must also fulfill the needs of the employers offering new jobs. A person seeking a job must be very active and must keep himself abreast of latest developments without which his or her survival and progress are not possible.
Objective of the Ph.D. Thesis (Based on the review of developments in 21st Century)

The objective of my Ph.D. thesis is to analyze the role of computer science and its application in the context of the generation of employment for the young generation. Development of science in general is continuous and it prefers the background for development of the specific field of operation like computer technology and its application.

Development of technology and its application in the field of computer engineering increases the importance of innovative knowledge, which in turn leads to the progress of scientific approach. The result of these developments is to facilitate further research in science and technology. Computer technology and advances in its application create jobs for those who have acumen in preparation of different computer programmes and strategies for general economic progress and development of intelligence helping the process of discovery of concrete solutions to emerging problems in industrial management and business administration. Recently, Dr. Stephen Wolfram, a British Scientist has written a very thought provoking book on 'A New Kind of Science'. (Cellular Automata) The various experiments made by Dr. Wolfram are instrumental in the development of 'Cellular Automata' which enable future development of advanced strategies and programmes.

Advancements in Computer Technology and application are inevitable in any branch of knowledge. The variety of problems and functions innovated provide a basis for creation of jobs for individuals which are challenging. Availability of personal computers has greatly facilitated the educational process in the field of business management & administration.

Consequently, a new system of education requiring professional approach to management of problems has become inevitable. Institutions imparting computer education have been performing the new innovative role rather than traditional role in the system of education.

The traditional educational system and governmental administration and social attitudes to jobs (Value System) are the factors responsible for creating problem of employment of the unemployed graduates of any faculty. For that matter, education which is being provided is theoretical and hypothetical cannot develop accuracy, precision, and love for hard work among the graduates who meet with frustration and perversion because of inavailability of an honourable and lucrative jobs.

The social economic atmosphere is not congenial and government's indifference towards framing right policies and successfully implementing them has added to difficulties of the graduates. They first get frustrated because of the
political rhetoric which does not care to meet the commitments faithfully made since 1990-91 in the context of globalization and privatization. Government employment policies and human resource development policies have failed to create job opportunities. The former finance Minister Dr. Man Mohan Singh declared that every year 1 Crore job opportunities will be created till 1997-98. However only 39 lakh job opportunities were created and in the regime of Vajpayee Government, only 69 lakh job opportunities were created. Government policies also have adverse impact on development of large scale and small scale industries creating limitations. Consequently and obviously the figure for registered unemployed has reached 4 Crores (Total 10.5 Crores) and till 2012 jobs will have to be provided to 17 to 18 Crores job-seekers.

The rising number of the unemployed is owing to globalization and privatization process. The problem is getting aggravated. However, on the other hand, new job opportunities are being created in the fields of telecom banking, finance and insurance. There will be job opportunities created for business executives because of the aggressive marketing of credit cards, home loan and vehicle loans. According to the Study of Internet site made by Monster.com- new opportunities will be created in the field of health and engineering. Such opportunities will grow in number in IT and Outsourcings (Approx. - 2 Lac. Job opportunities) Various avenues will be opened for good technologists-cum-Business Administrators belonging to such areas as knowledge management, IT consultancy, IT product Development, automobile, Bio-Technology, Oil and Gas Exploration, Pharmaceuticals, etc and such new avenues as hotel management, tourism development will be added to the industries. According to the Study made by NASCOM in the area of IT till 2008, 1.20 thousand technologists will be needed with the following break up -

- Export of IT service 4.60 lakh.
- IT service in India 5.20 lakh.
- Production and Technological 1.40 lakh.

The expertise required from them will be for programming, Web development, coding and designing. It is therefore necessary to plan for short term post in software for the graduates and undergraduates. In Maharashtra state, right from 1984 till today the Government, non-government (aided, unaided colleges, institutes and university departments) which run MBA/MMS programmes have been training and conducting common entrance test, and group discussions and personal interview programmes and have placed major emphasis in verbal ability, reading, comprehension, quantitative aptitude and logical reasoning as criteria for eligibility for career in business management and administration.
The fields of computer utilization have been expanding every movement and new models with precision are being introduced in commercial and business administration and have been encompassing all aspects of public life. The size of computers is getting smaller and smaller as a result of innovative technology and they are being sold at competitive prices. Verichips and microchips have come into the scene with their scanner and readers which will make reading other persons more facilitating.

The important factors influencing higher education during the last 10 years of 20th and 21st Century have been:

1. Development of IT
2. Increasing number of knowledge areas (Faculties)
3. Development of competitive research
4. GATT, WTO, World Bank, UNESCO providing momentum to the process of Globalization, Liberalization and Privatization.
5. Foreign Universities getting hold over market for Indian students
6. High code education depriving eligible students of their higher educational opportunities.

Accordingly, short term diploma IT courses are being conducted for imparting knowledge regarding daily use of computer, development of computer software and skills in drafting, storing of information, project reports, calculations, use of internet, E-mail, chatting, net meeting facilities, web site, E-shopping and E-banking for matriculates. The share of India in international trade with only 0.5% privatization implies not only reduction in the role of government but also in the process of educational restructuring. Imports grow along with exports and create a competitive atmosphere. Industries are to be run by proficient business management and business administration. Owing to globalization the rate of economic growth has gone up to 6% p.a., inflation rate has gone down from 8.5%, 9% to 5%. However, budgetary policy of deficit financing is going to create some constraints. U.G.C. has prepared a scheme for scrutinizing applications by foreign universities and colleges and the Ministry for HRD would approve it in view of GATT on liberalization of higher education. The number of foreign students in India has increased from 13707 in 1993-94 to 70791 in 2000-01. A new venue will be opened by foreign universities and colleges for Indian brains and make them knowledgeable in new techniques in business management and business administration. Inavailability of computer skills is therefore not permitted by modern times. Deadline is most important in business administration and computer has a great contribution to make in reducing business tensions by increasing accuracy and reducing time and human power requirement.
Knowledge of the principles of routine business administration are made obsolete and new principles and practices of coordination, decision making facilitated by computer knowledge and skills will go a long way in bringing about harmonious and accurate business decisions and their timely implementation in business administration.

Computer courses have become guide for all educationalists, professionals, artists* and even in personal day-to-day life. A new idea (emotional intelligence) can change the life and computer skills go a long way introducing 'ideas', power to think, comprehension, reception and power of appreciation, informative knowledge, logical knowledge and understanding are the aspects of brilliance and this power is increased by memory provided by computer examination-management, resource-management can be planned, programmed and 'administered' with greatest accuracy reducing risk element (created by uncertainty) in business management and business administration. Such a student and manager of business is the product of a computer, which facilitates the process of understanding, comprehending, memorizing, improvisation and accurate calculated expression. It brings about a balance between intelligence and emotion.

The objective of the Ph.D. Thesis, based on the above observations, is thus to analyze and interpret the scenario in the context of job opportunities. It examines the relationship between computer knowledge and application and creation of new career opportunities for the potentiality-promising graduates and undergraduates. It analyses the demand aspect of the problem and the profile of students seeking and aspiring for challenging jobs in the field of computer application and also the supply side of the problem under investigation.

*Mr. Shriram Karandikar- an artist in painting is no longer afraid of computers. This has unlocked his imagination in a new way. The growing painter who has gone creative with the mouse says 'Latest tech has liberated me from the 'conventional' constraints of the canvas.'

Note: The same thing can happen in the field of business administration.