Historically human beings as toolmakers transformed the techniques of production and gained control over nature. The countries that were under colonial rule and gained independence in the 20th century also recognized the potential of modern science and technology for economic and social development. The governments of developing countries announced policies related to the development and deployment of modern science and technology in various sectors of production and services. Development of modern science and technology was sought to be achieved by expanding the existing institutions and establishing new institutions devoted to development of human resources to carry out teaching and research.

In the 21st century one of the most important technologies is Information Technology (IT), which unleashed far-reaching implications for production, services and culture. The advanced countries have been undergoing transformation with a wide range of application of Information Technology. Most of the developing countries have also recognized the potential of IT for economic and social development. Political, cultural and education sectors are gradually getting transformed due to the introduction of IT, thus creating conditions for major social change in societies.
To sustain the economy based on IT, it is necessary to develop software, hardware, appropriate organizational innovations and highly skilled manpower with high technological skills. It is here that education plays an important role. Countries, which provide IT education to train IT professionals, tend to have great advantage in the present day context. The demand for IT professionals has generated flow of trained IT personnel across countries and continents.

IT professionals from the developing countries like India have been migrating to USA, Europe, and some of the Asian countries like Singapore, Thailand and Malaysia. The push factors for the migration of IT workers are limited employment opportunities, under employment, low salaries and lack of infrastructure. The pull factors are high salaries, social recognition, rich lifestyles and good employment in the countries of destination.

Due to high esteem and social prestige, in addition to the monetary benefits and number of perks, associated with the information technology jobs, members of diverse social groups have begun to attach a great deal of importance to information technology education. As a result thousands of IT institutes emerged over the last two-decades across the country both in public and private sector to provide IT education at different levels. Although diverse social groups have been obtaining degrees and diplomas in IT education, access to IT education opportunities tend to be influenced by the pattern of organization and distribution of IT institutions and the socio-economic and cultural background of the students who are interested in pursuing the IT courses. The aim of the present study is to
explore how far IT education is accessible to different social groups in a highly stratified Indian society.

Indian society is stratified according to caste, class, gender and region. Access to opportunities in education is influenced by the social economic position of a particular individual in the system of stratification. Access to opportunities is also influenced by the way education is organized in terms of public and private sector organizations. Although a number of sociological studies have been carried out on education in relation to social stratification, these studies have not examined the values attached to the IT education and extent of access to it because IT Education its employment potential and the prestige associated with it have begun to be noticed in the recent times.

In this context, the study aims to examine the organisation of IT education and the degree of access to different social groups. The study also presents the motivational factors and attitude of students on IT education. It is indispensable to give a conceptual view of the origin and growth of Information Technology and its role in shaping evolution of information society, and its far-reaching implications for the diverse sectors.

1.2. Information Technology: An introduction

Technology is one of the greatest engines of economic growth and social change in society, and its role has been increasing day by day. Information Technology is not only transforming the way information is produced, distributed, and consumed, but also changing the form and organization of the diverse sub-systems of the society in a significant way.
1.3. Information Technology: Definitions

Scholars have defined Information Technology from various perspectives; here some of the definitions are discussed. UNESCO (1999) defines Information Technology as "scientific, technological and engineering disciplines and the management techniques used in information handling and processing, their application, computers and their interaction with men and machines and associated social, economic and cultural matters" (Satyanaraya.R 1996: p.67).

According to Sansanwal (2001) Information Technology is "a term -used to cover technologies used in the collection, processing and transmission of information. It includes microelectronics and info-electronic based technologies incorporated in many products and production processes and increasingly affecting the service sector. It covers inter alia computers, electronic office equipment, telecommunication, industrial robots and computer controlled machine, electronic components and software products." (P.15)

Sansanwal (2001) defines, information technology as a systematic study of artifacts that can be used to give form or description to facts in order to provide meaning or support for decision-making and artifacts that can be used for the organization, processing, communication and application of information.

Shaozhi Su (1988) views information technology as the term, which a aggregates number of new technologies including electronics, computer hardware and software, robotics, computer-aided design and manufacture, photo voltaic technology, biogenetics and yet other new inventions. Combinations of
technologies, products and techniques have combined to provide new electronic dimensions to information management.

The above definitions imply that Information Technology is a very broad concept with applications throughout the sciences, engineering, education, economy and services. It deals with how we generate, compute, store, and use information.

1.4: Information Technology- Scope

The recent great strides in technology present tremendous opportunities for human development, but achieving the potential depends on what kinds of technologies are to be developed and how technologies are used. The rat race for knowledge, with the advent of knowledge economy at the forefront of the global interaction, a great deal of attention has been focused on information and communication technologies (Human Development Report, 1999).

The blend of computers and communications unleashed an unprecedented exploration of ways to communicate at the start of the 1990s. Beginning with this period there is a tremendous productive gain; ever-falling losses and rapidly growing networks of computers have transformed the computing and communications sector. The first half of the 1990s experienced a shift of Internet from a specialized tool of scientific community to a friendlier network transforming social interaction (Ibid).

1.4.1. Information Technology-Flexible production

The invention of computer is the most important event in the history of technology. Industrial revolution helped in reducing the need for arduous physical
labour - tractors replaced horse-driven ploughs, steam shoals replaced hand picks and so on. Computer technology will allow similar elimination of the need for tedious, repetitious and uncreative mental labour. Computer-based occupations require semi and highly skilled human force. Computer-based production is based on knowledge not on the machines. As the IBM slogan says ‘machines should work; people should think’ (Douglas, 1998).

Information Technology is profoundly changing the production system shaped by the 18th century Industrial Revolution. Mass production of standard goods had given way to flexible production of customized products, along with new techniques like just-in-time production and inventory methods that demand closer proximity between suppliers, buyers and markets.

Information Technology also created new products that offer new opportunities: the developing countries could take part in the production of Information Technology, not just make use of it. Lyon (1988) viewed that information technology, by shortening labour time, practically replaced labour as the source of added value in the national economy; knowledge, information and supplant labour, and capital becomes the central variable of the economy.

1.4.2. Information Technology-The service sector

Information revolution has transformed the nature and significance of services and made the service sector as the largest economic sector and the largest employer in most industrialized countries (for example in the U.S., two-thirds of GDP and three-quarters of jobs). Until recently, most services had to be produced
locally, customized to buyer needs. Now advances in informatics and telecommunications abolish distance. Information provided on a screen or a phone can be handled anywhere in the world: airline reservations, engine design, security monitoring, accounting and management services etc. It is recognized that information technology is virtually spread into all spheres of social life and knocking at the doorsteps of every field (Lyon, 1988).

Information Technology also fundamentally changed the delivery of a wide range of services. For example, there is great interest in Information Technology application to health care in order to deliver services more efficiently and effectively, to encourage preventive medicine, and to provide in-home alternatives to hospital care. New technology can link educators, researchers, students, policy-makers, and institutions, within or outside the country, and has a great potential for “distant learning” and mass education.

1.4.3. Information Technology and Governance

Governments as the biggest data-collectors need information to make policy decisions. IT can enhance everything from policy analysis to accountability. IT can make tax collection effective, improve the management of the civil service and public enterprises, to gain these public benefits, databases must be created. Further, IT can also help governments deal efficiently in managing the crisis. With this foregoing account on the definition and scope of IT, in the following pages we review sociological perspectives on technology in general and IT in particular.
1.5. Sociology of Technology: Theoretical perspectives:

Sociologists have recognized the need to understand the socio-economic and cultural context, which influence the development of technologies at different levels at different points of time. Science and technology increasingly becoming a key determinant in explaining successful national development and competitiveness in the world system (Dore, R 1989). In order to explain technology design and development, one has to be aware of the complexity of technology and technological knowledge itself. Technology is not a neutral factor so it cannot be considered a black box ((Ibid).

Technology is a bundle of different components (Rothboeck, 2000). It was named as a techno-economic paradigm that includes, technological, institutional and social competence. Technology is the result of specific experience in design, production, path-development of economic, political and cultural decisions (Patel and Pavitt, 1995).

Ogburn (1922) opined that sociologists' interest in technology takes two major forms. First, sociologists attempt to understand the context that produce technology and promotes its uses by the society. Second, sociologists study the application of technology in the society.

Ogburn one of the first sociologist to observe the technology and its impact on culture. He argues that material culture tends to change faster than nonmaterial culture. Although technology changed at a breathtaking pace, the changes in government, the economy, education, and religion in order to keep pace with
technology have been much slower. Ogburn names the gap between material and nonmaterial culture as a "culture lag".

Technological deterministic viewpoint sees technology as an autonomous entity with its own logic that is not subject to human control. Basically it emphasizes that human beings create tools, but ultimately tools control the human society. Porat (1977) analyzes the rise of the information society in the United States as a gradual evolution that stems directly from the organizing principles of industrialization and the realities of capitalism, not from a revolution initiated by the invention of computer or other technologies. The concept of information as an object is seemed to have emerged in Europe in the 17th and 18th centuries in response to enlightenment values.

Mackay (1995) point that until recently most of the sociologists didn’t show any interest in understanding the society and technology relationship. Very few studies were carried out to understand the internal relationship between these two major entities. But this trend has changed considerably since the 1980’s particularly with the progress and advancement of both (physical) information technology and (social) debate surrounding it.

Mackay (1995) viewed that, sociologists of technology are primarily concerned with explaining how social processes, actions and structures relate to technology; and concerned with developing a critique of notions of technological determinism. Technological determinism is the concept, which explains that technological advancement is autonomous of society; although technologies shape society, technology can't replace the existing social structure.
Here technology is viewed as the key-determining factor in society. The fundamental notion of the technological determinism is neither its theoretical sophistication nor its explanatory utility. Rather it may be important because, primarily it is the single most influential theory that attempts to explains the relationship between technology and society (Mackenzie and Wajcman, 1999). Practically world technologies do not follow some pre-determined course of development, the technological impacts vary from one culture to another, depending on a broad range of social, political and economic factors.

Encyclopedia and Dictionaries have described information technology as modern design for presenting information that prefigures the rise of modern approaches to inventing and distributing information. Bell (1980) and Porat (1977) attempted to provide an explanation of the relationship between industrial society and the information society by highlighting the interconnectedness. Empirical data is marshaled to indicate that the information workforce grew to a large size much earlier in the twentieth century than that has been previously expected.

The experience of living in the information society is addressed as the construction of private spheres within media environment. The consumption of information has become an increasingly necessary and conspicuous aspect of everyday life. The question of proper social distribution of information is considered in the context of several prominent theories (Porat, 1977).

William's (1983) concept of 'symptomatic technology' explains that technology is a symptom of social change. According to this theory society is in the driving seat of history, given a strong social demand then a suitable technology will
be found. The key theme of the social shaping of technology perspective is that it serves as a needed corrective to technological determinism (Winner, 1999).

Basically technology, in essence, is social in its roots as well as in its effects. Choice and social negotiation are part of the design. Two broad approaches have dominated the social shaping of technology.

The first approach is basically 'micro' in nature and the second is neo-Marxist. First approach consists of three schools:

a) The social constructivist
b) The systems
c) The actor-network.

The social constructivist approach (Bijker et al, 1987) bound to the sociology of scientific knowledge (SSK). It treats scientific facts as socially constructed rather than existing in the natural world and awaiting discovery, technological artifacts are socially constructed. Basically, technology emerges out of processes of choice and negotiations between the 'relevant social groups', and interpretative flexibility' i.e. different meanings/ view varies corresponding to the interpretation of the social classes.

Hughes’s (1986) network, or system theory views functional groups i.e. builders, inventors, engineers, managers, financiers, heterogeneous social groups/classes, organisations, institutions and disciplines become part of a ‘seamless web'. Hughes approach is most applicable to the large technological systems. The actor network approach specifically varies from the social
constructivist agenda where it lacks in providing ground distinction between the technical and the social factors (Callon, 1986; Latour, 1987; Law 1987).

The notions of 'actors'- physical and social that are involved in the development of technological systems replace the conventional categories distinguishing animate and inanimate things and forces. According to Law (1987), the management or enrolment of both physical and social actors into networks—using heterogeneous engineering builds the technological systems. This blend of heterogeneous elements and the advancement of technology are viewed in terms of the relationships formed between human and non-human elements of actor-networks.

Second is the neo-Marxist approach, which is associated with Braverman (1984) and Russell (1986). They argued that technological change could not be completely understood with reference to particular/ individual inventions. Rather there is need to examine how broader socio-economic forces affect the basic nature of technological problems and solutions.

This perspective fundamentally criticizes the social constructivist approach for neglecting the broader political and socio-economic context within which a technology is developed. According to this approach technology is designed consciously or unconsciously to protect, secure and give an edge to particular social class. Although these arguments are partially true practically technologies are not simply the direct translations of economic imperatives into tangible machines and operations.
Winner (1999) distinguishes those technologies that are political in nature. They are designed to achieve political intent, and those that are political without intent views technologies which either require or are more compatible with particular social relations (e.g. nuclear power and the strong state, to guard plutonium). Thus, in one way or other all technologies are political. The modern computers are the core to fulfill the primary requirements of the military. For instance the massive main frame, built in 1946 in the university of Pennsylvania, was intended to assist the aiming of guns, and was soon involved in calculation for the atomic bombs (Lyon, 1988).

Winner (1999) pointed out that as a corrective of technological determinism, the social shaping of technology approach has its own limitations. For a while, social shaping of technology is opposed to technological determinism, but it nevertheless shares one fundamental concern. In differing ways, both firmly rooted their focus on the first sphere of a technology- its conception, invention, it roots within a complex of social forces, which not only anchor, but mould the inventing process (Mackay, 1995).

The social shaping of technology is not a complete one because of its failure to consider the social forces at work on the other side of the technology; especially the way that technology come to be actively adopted or appropriated by their users. People are not merely passive subjects to technology, but they are active, creative and expressive subjects.

People may reject and redefine the technological functions; they may redefine technology in a way that defies its original, designs and intended purpose.
So the appropriation and adoption is an integral part of its social shaping. According to Noble (1984) technology leads a double life, one that conforms to the intentions of designers and interests of power and another that contradicts them - proceeding behind the backs of their architects to yield unintended consequences and unanticipated possibilities.

Although the appropriation of technology may not be completely separate from its design and development; technologies are designed to meet particular goals and objectives. In the words of Mackenzie and Wajcman (1999) 'technologies can be designed to open certain options and close others'.

There is a third body of literature, which deals with the social shaping of technologies in relation to consumption. According to Hall (1980), technology facilitates, it does not determine, and they may be used in number of ways. In simple, social appropriation of technology is crucial force in social shaping of technology. While talking about the 'double life' character of technology Keen (1987), contended that 'the character of technology is complex and contradictory; technology leads a 'double life 'or has dual effects.

1.5. Implications of Information Technology for Education

We have seen that IT has far reaching consequences for the economy, polity and culture. Social shaping of IT and it's grounding in a given society, starts with interaction between IT and education. The transformation of education may be the most important of the many practical revolutions sparked by computer technology. Computer technology will alter the very "goals of education". Douglas (1998)
points out that the very technology-causing problem has the remedial power to come through the existing problems. Another fundamental change in education caused by the computer technology will be skills that students need to develop.

Thus in the traditional three “r”s (reading, writing, arithmetic’s) of education, only reading is going to survive unscathed. According to Douglas (1998) the driving force behind the present day civilization is the phenomenal growth of Information Technology.

The application of Information Technology within the government, education, media and the domestic sphere as well as in the work place implies that the machines mediate more and more social relationships. So there is need for highly skilled professionals to meet the requirements of production and service industries in information society.

In order to train the information technology professionals there is need to organize information technology education at different levels. The demand can only be met if the percentage of population engaged in software, hardware, and peripherals production grows in correspondence with these developments. In the long run the industry engaged software creation, adoption and application would become a major employer.

As microcomputers with large-scale integration have become available, they are being used for an ever-greater number of applications and range of equipment and systems are also deployed to meet the software technology development. As mentioned above, well-trained manpower i.e. trained software knowledge professionals are very important. Education is an important domain,
which is being influenced by information technology with incredible speed. The changes being introduced in the sphere of education have generated growing interest among the world community of educationalists and the social scientists to understand role of IT in education. India is no exception in this area.

Education plays an important intervening role in the process of social shaping of technology. As we discussed earlier the factors that influence technology development is economic, social, political, technological, and scientific. Technology developments also shape an educational environment conducive for the technological growth. The values that guide the content of education, and the actual content are important in this context. It is through education that human resources both in quality and quantity in science and technology are shaped and sustained.


In order to study how IT education is shaped, it is useful to draw concepts and theoretical perspectives from sociology of education. Sociology of education is primarily concerned with family, education system, economy, polity, and relations between these instituions. The concept of culture in sociology of education is primarily used in theories of socialization. The process of socialization is perceived as building of the consciousness of human subjects through internalization of culture.

Sociology of education also concerned with the social class differentials in access to education. Sociologists are increasingly focusing on how educational experience differs by virtue of race, caste, and social class, and they make
suggestions for improving the experience of marginalized social categories. Sociological studies also examine how the growth of technology transforms priorities of the educational system. The nature of education becomes a central issue for sociologists who followed different approaches to understand the nature of education in relation to society.

The functional and conflict theorists provide alternative perspectives regarding the forces that bind societies together and the role of educational institutions in society. First, the study presents functional theory to illustrate its application in the analysis of educational institutions. Secondly, outline the conflict theory. The functional school of thought views education as a basic necessity for the progress and development of society. To maintain stability and social order education is considered as the most vital institution.

1.7. Functional approaches

According to functional theorists the societies and biological organisms share common features. Both are composed of many distinct, but interdependent parts, and each part makes its contribution to the survival of the whole. Both tend to maintain a state of relative equilibrium. If one part of the system disturbs, or threatens to destroy it, all of the other parts react to bring the system back to an even keel.

The same could be applied to human bodies. In an analogous fashion, societies adopt to the physical environment, maintain adequate levels of production, distribute essential goods and services, keep conflicts under control,
and so on. Hence functional theorists point out that societies cannot survive unless their members share at least some homogeneous sets of perceptions, attitudes, and values.

Structure and Function: For functional theorists, societies are made up of different parts. These parts are institutions that make up the social structure of every society. Functional theorist’s views on institutions highlight the significant contributions of each part of society to the survival of the whole. This contribution is its function, and functional theorists show how these institutions, norms, and social roles function in continuing survival needs of various societies.

1.8. Durkheim’s approach

The traditional conceptual framework in sociology of education is primarily drawn from the functionalist perspective, and derived primarily from the writings of French sociologist Emile Durkheim. He is considered as one of the founding fathers of sociology and sociology of education. He conceives sociology as ‘science of institutions’; Durkheim (1956) while talking about the common education, argued in favor of state controlled education system, which is universal in nature. His emphasis is on elementary education. He viewed education as a process, which enhances the progress of social order and strengthens the social system through it.

Durkheim’s approach in understanding the problem of social order highlights two basic ideas. First, Durkheim assumed that modern societies are held together by the mutual interdependence of social groups. The complex nature of the
division of labour shapes social groups as mutually interdependent, and ultimately contributes to the social stability and social order of the society (Ibid).

Secondly, he emphasized that for the collective interest of society, individual has to sacrifice some of their self-interests. Durkheim pointed that for the smooth functioning of the society social groups and individuals should learn the language, and acquire skills. He stressed that learning should create a sense of commitment to the integration of the society, and internalization of its most central values and ideas. One must change from being egoists, responding greedily to his/her own endless self-centered desires, to a moral citizen, responding in terms of his/her duty to the state.

Parsons (1959), another pioneer of functional tradition, noted that an educational institution in modern society performs the role of ‘socialization’ and ‘selection’ of individuals for diverse needs. It is the function of the educational system to "select" the students for different occupational slots as well as to socialize the selected. For Parsons the most important selection is between those who go to college and those who fail to go.

Parsons contends that the fundamental base for the selection into colleges is achievement; these instituions reward children with high grades. In the higher grades, the accomplishment is increasingly measured in intellectual terms. It is not sufficient to try hard; one must also succeed in mastering the material. Parsons argues that schools must reward children on the basis of achievement and that is the central to the larger view of the integration of educational and economic systems in modern societies.
Parsons emphasizes that in modern societies different individuals must be allocated to occupation according to their ability to perform effectively in their respective roles. The modern societies demand most talented and experts in particular fields. Here the achievement takes primordial role rather than the ascribed status as in the case of traditional societies. However industrial society allocate the roles on basis of achievement.

To sum up, Parsons's argument highlights the functional interdependence of educational and other institutions in the society. He attributes two basic functions for education. They are socialization and selection. Schools fulfill these two processes, and provide well-qualified individuals for the societal roles. Allocation to these roles is purely based on achievement and merit. Schools also promote value consensus and depend upon it for their smooth operation.

Davis and Moore (1945) employed Parsons’s idea of Vole allocation', in order to understand social stratification. According to functionalist scholars, social stratification is a means of ensuring that the most talented individuals to fill the most important position of society. The high rewards and awards for these key positions work as the motivating factors for the students to compete for the functionally important positions. Davis and Moore viewed that education is a means to demonstrate ability to achieve higher position in the society. Education works as an agency, which differentiates the people based on their ability and merit.

The functional theories emphasize on the meritocracy to legitimate the claims of high skills and high rewards, became more popular among the followers
of this school of thought all over the world. Daniel Bell's (1972) concept of post-industrial society extends the meritocracy thesis and emphasizes the selection based on merit. Bell argues that without that achievement one cannot fulfill the requirements of the new social division of labour, which is a feature of the post-industrial society. Formal educational qualifications work as an entry device into the system but subsequently achievement brings material and symbolic benefits.

However, the conflict theorists launched a vehement criticism on the functionalist approach in understanding the educational system and questions of equality of opportunities in the society. Conflict theorists have criticized the functional school of thought on the grounds of comparing biological systems with social systems. According conflict theorist social institutions are not biological organs and individuals are not biological cells. Human society and institutions are historical creations. Human behavior is purposive and goal directed. Man has the power to think. Thinking, perceptions of the world, attitudes, norms and values all affect one's own behavior.

1.9. Conflict Perspective: Approaches to Education

Conflict theorists approach to the education is in quite contrast to the functional approach. Conflict theorists primarily focus on the coercive nature of society and the pervasiveness of social change. To conflict theorists, power struggle is the driving force in transforming the social institutions. They see two antagonistic groups in the society i.e. the powerful and the marginalized. According to this, powerful social groups that seek cooperation from the less powerful and
marginalized control societies on the one hand; and societies are perpetually changing due to the power struggles that result in formation of new elite groups, replacing the old.

Conflict theorists argue that the social systems are fundamentally divided into dominant and subordinate groups. The relationship between these groups is exploitative in nature, with the dominant group controlling most of the material and non-material resources. In addition to this, the dominant classes also try to impose its own values and worldview on subordinate groups. The subordinates on the other hand, in the process of achieving control over forces and means of productions work as a constant threat to the stability of the dominant elite (Dahrendorf, 1959).

Althusser’s (1985) interpretation of transformation in education is based on the structural version of Marxism, which proposes a historical context, for analyzing both structural forms and transformations in functional forms. As discussed earlier, conflict paradigm views education as a constituent of the state. According to Althusser (1985) the state power and state apparatus works as agency in the reproduction of the existing social order.

Ideological State Apparatus (ISA) in the process of shaping the educational systems to meet the requirements of the state transformed the institution of education, which was characterized by the absence of both centralization and bureaucratization, permitting a situation of voluntarism and diversity replaced with centralized and structured nature of system. According to this view, advancements in education functioned as one of the elements of reproducing the culture of existing dominant social groups.
The period of post-1960s witnessed the breakdown of functionalist paradigm in sociology of education, the works like Young’s study on curriculum, and the work of Bowels and Gintis (1976) highlight that educational institutions function above all as agencies that necessarily reproduce the social relations of capitalist production.

Hayek (1960) launched a powerful critique on the notion of meritocracy and achievement as the basis of reward, and vehemently opposed any attempt to legitimize social inequality from meritocratic perspective. According to him inequality is the inevitable outcome of a market economy. He also rejects the notion of functional importance of differential positions and attributing needs or requirements. In the streamed system, preferences to the streams vary according to the importance given to particular streams, by different groups across societies where the prestige and occupational status play crucial role in determining importance attached to particular discipline by various social classes.

Here it is noteworthy to highlight the contributions of Gramsci (1971), an Italian Marxist thinker, who differentiates state and the civil society. According to him hegemony of a class develops at two levels, one at the level of the state and two at the level of the civil society. For illustration laws, and educational institutions undergo the process of hegemony. According to Gramsci, schooling plays an important role in modern society. The school system is one part of the system of ideological hegemony in which individuals were prepared to maintain the status quo.
He further argues that social character of the traditional schools tend to be determined by the each social group in society and evolves as typical school which perpetuate a specific traditional function of the ruling class. He criticized different types of vocational schools that aimed to promote the modernization of Italy, rather he preferred, to evolve a single type of formative school (primary-secondary) which would nurture the child to attain his choice of job, providing capability of thinking, studying and ruling (Gramsci 1971).

Similarly the writings of Bowles (1976) provide a clear example of the application of the conflict model to contemporary educational institutions, especially those in the United States. The themes of conflict, change, and coercion appear throughout his works. According to him, in pre-capitalist economies skills are generally passed from parents to children through informal mode of education. He stressed that the capitalism replaced the family and church as the agents of socialization and forced those institutions as less effective agents of socialization. He argues that the mass education, compulsory public schooling aimed to serve the vested interest of capitalist system; Firstly, mass education could supply workers with the cognitive, intellectual, and technical skills required by the capitalist economy.

Secondly, it could supply workers who had already learned the values and behavior conducive to productive labor. Children could be taught punctuality, discipline, and acceptance of responsibility for their work. Thirdly, the schools could teach loyalty to the state and obedience to the law. This loyalty could be achieved by convincing children that the system was benevolent but in reality
actually legitimizes existing inequalities in the social division of labor by justifying that these inequalities are based on merit rather than on coercion.

According to Bowls ‘equality of educational opportunities’, and merit and reward system are myths. He argues that the educational system rewards children differentially on the basis of their class origins. Children from elite families become the elite of the next generation. Children of the poor remain poor. Bowles' analysis represents the conflicting interests of various social groups and the ways in which those in power can use such social institutions as the agents to justify and maintain an essentially coercive and exploitative system.

However, Bowles' analysis fails in explaining the evidence that schools do permit upward mobility or in accounting for efforts to reform schools in the interests of greater social equality. While dealing with these issues, Bowles pointed that they are merely subtle mechanisms to maintain the system and not meaningful avenues to equality.

Bernstein (1970) shows the causal relationship between the class and the linguistic values and ideas, he concludes that linguistic ideas work as agents of symbolic control over education. Educational institutions tend to shape by the state goals to suit the interests of the privileged and affluent sections of the society at the same time it also excludes the lower classes of from the educational system.

Goldthorpe (1997) while talking about credentials criticized the meritocracy theory and argues that the educational systems of modern societies do not necessarily function it assumed, both either in identifying talent among diverse
social sections at large or in providing talented individuals to serve technical and high position jobs.

If labour is governed by possession of formal qualifications this is not advancing meritocracy but rather rising “Credentialism” (Berg 1970, Dore 1976, Collins 1979).

According to this school of thought qualifications are being used not in the interests of raising levels of individuals 'efficiency' and social efficiency. Rather than reducing disparities among different classes and ethnic groups the credential system accelerates inequalities.

The conflict theorists also criticized the functionalist interpretation for being dogmatic in exaggerating the positive contributions that various parts of society make to the functioning of the whole and for ignoring the destructive effects of other elements (Demaine, 1981).

1.10. Education and the ideology of parentocracy:

According to Brown (1997) the social character of educational selection has been an important area of sociological concern, which particularly gained momentum since the Second World War. This interest not only reflects the importance attached to education as a crucial determinant of future life chances, but also the growing commitment in generating equality of educational opportunities.

The commitments and concerns have led sociologists to examine the extent to which educational change had actually generated a more ‘open’ and 'equal' society. The idea of meritocracy becomes widely accepted practice of sociologists
located in advanced industrial societies. The popularity of Marxist scholarship in the 1970’s in education was largely in response to the failure of reforms in western societies in extending education to working class children (Ibid).

Marxist perspective perceives liberal reforms as legitimating the interests of capitalist classes. Brown (1997), developed a new concept called ‘third wave’. according to this, the socio-historical developments of British education is neither a drive towards meritocracy nor the result of socialist victory of educational developments. The third wave is associated with the rise of the educational parentocracy where a child's education is increasingly dependent upon the economic potential and wishes of parents instead of ability and efforts of pupils.

Brown’s ‘third wave’ characterizes the rise of ideology of parentocracy. This imbibed the notions of 'parent choice' ‘educational standards' and ‘free markets’. Brown analyzed the qualitative and quantitative expansion of education over a period by comparing with change in 'Waves'.

First wave associated with the development of mass schooling in the 19 century. It was intended to confirm rather than 'transcend' existing social divisions (Hurt, 1981).

The elementary education has largely aimed at instruction to meet the minimum requirements perceived to be necessary in order for the working poor to fulfill their future roles in a changing society. In Britain secondary education remained in control of middle classes until 20th century. The second wave is characterised by ideological shift in organizing principle, from education
determined by virtue of birth to one based upon one’s age, **aptitude and ability** (achievement).

The later stage of second wave incorporated the issues of gender, particularly by feminist writers who have attacked a class-based, but gender-blind sociology. It was found that during the second wave gender inequalities have declined, despite the fact that core gender divisions remain (Arnot and Weiner, 1993).

Brown (1997) claims that the third wave is still in infant stage. The third wave is an attempt to address the inherent contradictions of market system of education and the rise of parentocracy.

Brown (1997) attempts to why the ideology of parentocracy has come to dominate the educational agenda during the late 20th century. Secondly, what are the implications for educational selection and legitimacy? Brown addresses the above questions from two broader standpoints; firstly, the ideology of parentocracy and introduction of third wave policies have developed against the backdrop of high youth unemployment and economic recession. Brown claims that third wave was a response to traditional concerns about the social consequences of youth unrest, particularly those **who are situated in urban locations**.

Regarding the relationship between the education, certification, and social change, Brown **points out that the third** wave is a manifestation of a power struggle **for** educational certification, **which is undermining the principle of** equality of educational opportunities.
The shift towards the ‘credential society’ (Collins 1979, Murphy 1984) has gained momentum in the 1980s and continuing till today despite the decline in youth unemployment in West and USA. The acquisition of educational credential has become synonymous with an insurance policy to minimize the livelihood risk fuelled by the expenditure cuts in higher education, and declining rates of employment (Bernihill 1988). These trends minimize the scope for lower class students. Although they have intellectual potential their financial position hinders their chances of gaining access to educational opportunity.

1.1. Education and Feminism

Weiner (1997), while interrogating the relation between feminism and access to educational opportunities, examined the link between the women's education and transformation in the society in the form of 'wave'. The first wave started in the early period of the 19th century stretching into the first two decades of the 20th century, and the second from the late 1960s. The first wave movement was associated with the rising aspirations of liberal individuals drawing specifically on ideas about natural rights, justice and democracy, for extending legal, political and employment rights of middle class women.

Of liberal feminists demand access to education, and equal opportunities for both sexes to create an environment where individual woman's potential can be encouraged and developed. The second wave is associated with women's movement, which had employed a more radical approach and dissident origins in Marxist scholarship. Firestone (1970) in ‘Dialectic Sex’ defined society in terms of
sex or class system and encouraged feminist revolution. This group of feminists asserted the women's freedom and demanded for wider accessibility to education, employment and space in modern means of production and services.

1.12. Social Class and Education

According to the Marxist view, social class refers to a group's relation to the means of production and power struggle (Bowls and Gintis 1976, Cox 1948). For non-Marxist's social class is synonymous with socio-economic status of particular groups. Weber's theory of social stratification differs from Marxist theory of class because he introduced additional structural category called ‘status group’.

According to this, status groups are communities, which develop and continue in the form of life-styles, social honour and esteem. Weber's perception of social category depends on the definition and meanings attached by other to the social relationships. According to Weber societies are divided into groupings and strata, which intrinsically have distinctive life-styles and worldviews. When the status and class groupings conflict the members tend to accept fairly stable patterns of subordination and super ordination.

Weber analyzed power relations from pluralist standpoint. Though he accepts the Marxist analytical understanding of power that those who have control over the means of production exercise political power either directly or indirectly, he argued that the emergence of economic power might be an outcome of power existing in other institutions. According to him, power varies significantly across the time and
space. Power is an outcome of social, historical and structural circumstances (Gerth, H and Mills, 1958).

According to Ogbu (1997) social class refers to a section of society's population differentiated by education, occupation, and income. Ogbu (1997) argues that social inequality is a universal phenomenon but social stratification is not. The fundamental base for social inequality are age and sex. Social ranking of individuals should be considered as social stratification rather than arrangement of social groups or social categories in a hierarchical order of sub-ordination and domination in which some groups have unequal access to the fundamental resources of society (Berreman, 1982).

Ogbu (1997) pointed out that in western societies there is a differential relationship between members of its constituent groups to the fundamental resources. According to this, "some people by virtue of their membership in particular social groups, have almost unimpaired access to the strategic resources, which some other people, by virtue of their own membership in other social groups, have various impediments in gaining access to resources". (P.766)

It is common for different social stratification systems to exist within the same society. They include social class, ethnicity, racial, caste, and gender stratification.

Towards more inclusive perspective:

The distinguishing feature of class stratification is based on the economic status, an acquired characteristic. According to Ogbu (1997) in a social class system, social and political positions are often based on training and ability rather than ascribed status. It appears to be the case in West and USA. Ogbu noted that
vertical mobility, upward or downward, from one ranked stratum to another is legitimized in a class system. Ogbu (1997) argued that from comparative perspective the persistence of black-white inequality in general and in education in particular is due to racial stratification.

1.13: Political Interests and Education

According to Archer (1984) ‘state educational system’ is considered to be a “nation–wide and differentiated collection of institutions devoted to formal education, whose overall control and supervision is at least partly governmental, and whose component parts and processes are related to one another”. (P. 19).

Archer (1984) points that the definition of state system helps to distinguish it from earlier forms of education. Those who controlled education also owned it, in the sense of providing its physical facilities and supplying its teaching personnel. According to Archer (1984) education was private enterprise, and control derived directly from ownership was concentrated in a very restricted part of any population, but this educationally dominant group tends to come from different sections of different societies.

Archer asks, why do the educational characteristics change? The answer is simple: change occurs because those who have the power to modify education's previous structural form, definitions of instruction and relationships to society, pursue new goals.

Archer argues that education derives its characteristic features from the aims of those who control it. It immediately raises problem concerning the
identification of controlling groups, the basis and process upon which control rests, the methods and challenges through which it is exerted, the extensiveness of control, the relations of others to this control, and their educational consequences.

As Ranson (1985) points out the complex, often ambiguous, traditional framework of decision making in education with its assumption about who should be involved, whose values count, how decisions should be arrived at is being clarified, concentrated and centralized.

1.14. Challenges and changing priorities in higher education

The educational policies and priorities tend to be influenced by external and internal factors. Defluer (1976) claims that when the U.S.S.R put the first satellite into space in 1957, shock waves went through American educational institutions. Demand was made that educational institutions should produce more scientists, engineers and technicians to meet the Russian challenge and lots of funds were allocated to encourage the scientific education. In the recent past transformation in education is associated with, and indeed often seen as a consequence of the Information Technology revolution.

A number of scholars have focused on the structural changes in education with progress of Information Technology. According to Stonier and Conlin (1983) we now live in a post- industrial society and for better or worse we have moved into an information age. As pointed out earlier, developments in Information Technology and its far-reaching implications have begun to influence education system in significant ways. According to Robins and Webster (1989) the real
significance of Information Technology initiatives is a consequence of the ability to engage with and reinforce a broader transformation in the structure and character of education.

In Britain there has been a profound argument against the academic drift towards the humanities and social sciences (Gambrich, 1985), and an assertion of the importance of science, technology and engineering courses, which are assumed to be more important for the Britain's economic renaissance. As a result, the British Government launched a programme to increase 2500 Information Technology seats at graduation level.

Presently educational methods and policies are not supplying the stream of managerial talents which business and industry requires currently, the notion of pools of skills must be renewed, enhanced and expanded if the U.K. is to be successful in the current process of industrial regeneration (Robins and Webster, 1989).

According to Robins and Webster (1989) developed societies are undergoing fundamental transformations. This transition is associated with new flexible and decentralized forms of production, new class segmentation and with new forms of social control. As a result, it has become necessary to subordinate the educational system to the changing needs of the economy. Educational institutions are directed to produce skills, expertise and orientation, appropriate to the new forms of production.

To summarize, in the western societies the direction and content of education has been influenced by the economic, political, cultural and technological
factors. Regarding access to education, social stratification system that has evolved over time tends to influence the degree of access to educational opportunities. At this juncture it is useful to examine how education is organized in India and see the nature of influence of social stratification systems in Indian society on the direction, content and access to education.
Section-II

1.16. Education in India

The Indian educational system has been changing from time to time, with corresponding changes in the political regimes, and social structure the process of inclusion and exclusion has been continuing in educational system. Education system is characterized by a tradition of exclusion. Although education in the country has increased phenomenally, access to educational opportunities continues to be limited (Chitins, 2000).

Historically, education was considered as a sacrament, which strictly governed by the religious ethos, and values. Role of learning and dissemination of knowledge was assigned to the Brahmin caste in hierarchy. Over a period of time the process of imparting and disseminating knowledge legitimized and led to denial of access to other caste and women from learning. The pre-British India only gave space to the so-called savarna castes or upper castes in general and Brahmins in particular (Ibid).

1.17. Growth of modern educational opportunities:

The introduction of western education system significantly changed both the meaning and content of education. The introduction of printing press revolutionized the educational system and shifted the emphasis from personal, oral communication to impersonal communication of ideas through books, journals and media. This brought the sacred books to the doorsteps of diverse sections of people cutting across the caste, class and gender. The modern education gradually opened to all castes, religious groups and women (M.S.A Rao, 1985).
Education becomes a symbol of prestige and means of contracting better marital relations. Improved economic position and adoption of westernized style of life provides upward mobility possible within the framework of westernization. The process of social mobility, however, interacted with the process of sanskritisation where caste groups, or particular sections of these, being benefited by the new education and employment opportunities, tried to rise high in the caste hierarchy by claiming a higher status.

Formal education acts as means to acquire new skills for exploiting new economic opportunities outside the caste; English educated sections were differentiated educational preferences on the basis of income and values attached to each profession. The medical and engineering professional courses were ranked higher to teaching and law professions over a period of time (M.S. A Rao, 1985).

The growth of number of women in education also led to the emergence of a category called 'career women' who sought employment at different levels cutting across the professions. The demand for professions along with the salaried occupations have led to the growth of the middle class whereas in Europe the growth of middle class was an out come of industrial society (Ibid).

1.18. Education and social mobility

The social background of students, to some extent, determines the choice of courses, and the level of aspiration of the students is influenced partially by the occupations of their parents. Therefore, students hailing from lower caste and class and rural background tend to have lower aspiration levels compared to the high
class, higher castes and urban background students. When students from lower socio-economic background get access to higher education and good jobs it not only improves the income level but also enhances the social status of the family and caste (M.S.A Rao, 1985).

1.19. **Education** and stratification:

The foregoing account states the nature of relations between education and social mobility. According to M.S.A Rao (1985) the functions of education can be distinguished into two: first, differentiation, and second, selection. According to this, education acts as a differentiating agency to maintain and supply appropriately socialized individuals to each one of the strata. This differentiating function tends to become prominent in societies where rigid social stratification exists.

Secondly, the 'selective' function is considered to be more prominent in open class societies. The education system tends to select students from particular socio-economic strata. Individuals or a group belonging to particular socio-economic background exploit educational facilities of higher quality better than others.

At one level it is directly having a bearing on occupational mobility and subsequently enhances the economic status, while at another other level it works as an element of social prestige. Social mobility may occur at intra-generational or intergenerational levels. The latter is associated with first generation students.

Industrialization and urbanization created a condition for obtaining educational degrees within specialization for gaining occupational opportunity.
The higher positions in the industrial society demanded for higher learning, and education became an important avenue to upward social mobility in the hierarchy. In addition to education caste, race, religion, and income are basic indicators of social status (Sachidananda, 1997).

The degree of access to education to different sections of society varies from country to country and within a country from region to region. Sachidananda (1997) illustrates two sets of factors responsible for the differential access to education to different social groups.

One set of factors, revolve around ideological, cultural patterns, which discourage or reject the value of equal access to educational opportunities for all the sections including marginalized and downtrodden in addition to women. This operates in the form of segregation of educational institutions, denying admission to a particular category of students.

Other factors, attitudes of students to education also change significantly from one community to another and one status group to other. The social groups that were historically denied access to education tend to be unaware of educational opportunities as well as aspiring for the highest positions through education. Sachidananda (1997) pointed that the unequal access to education is glaring in nature within the existing social structure.

Stratification system and educational system of society are interrelated. The educational requirement of different social strata varies in nature. These requirements give rise to different pattern of preferences and different types of educational institutions, which caters to their needs. Due to the historical legacy,
even today the educational, economic, and political opportunities are determined by factors related to social stratification. The differences between status and cultures of different castes still persist to a large extent and continue to influence each group’s ideas, life styles, educational opportunities, educational aspirations, social mobility and standard of life and cultural capital (Shah and Shah, 1998).

Regarding the questions of accessibility it was the elite class that first entered new occupational avenues created during the colonial period. Although the post-Independent state policies, as part of promoting education, opened it to all in principle but empirical studies carried out by number of scholars across the country show that the modern education right from the beginning is under the hegemony of the middle classes, upper castes of the Indian society.

1.20. Organisation of Education

There is a dichotomous educational system going side by side in Indian society. One, state-centred institutions and second private corporate institutions. Pinto (2000) argues that Indian educational system is a mockery, since its inception. The high and middle classes manage to have the best education in quality, English medium institutions especially those managed by private corporate bodies help them towards social mobility and to climb the ladder of success. The lower middle classes and marginalized weaker sections have to do with the single teacher and ill-equipped public institutions.

According to a survey conducted by India Today (2001), a popular magazine, the top ten colleges in science, commerce and arts located in big cities
and controlled by the private management. There is no single government college in the top ten colleges.

Private corporate involvement in education not only reflects the fundamental divisions of society but also perpetuates social inequality. The private enterprise in education has got considerable importance due to the scarcity of higher and better quality of educational facilities offered by the government, due to its inability to meet the ever-increasing demand.

Jayaram (1990) adds that the private enterprise is largely capitalistic in orientation and operates strictly according to the principles of market economy. It mainly caters to the affluent sections and the 'middle class mobiles' in the urban areas.

Some of the complex formalities of the educational system that are primarily designed so effectively to contain the burgeoning demands for higher and professional education in fact act as social bottlenecks, necessarily favouring the elite and higher echelons on the stratification pyramid. This is one of the notable ways in which the educational system directly reinforces the prevailing stratification and rigidifies it further (Jayaram, 1990).

The steady growth and development of private education with state patronage and protection, and the resistance to a comprehensive reorganization of education could be viewed as part of a strategy of the privileged to transmit their privilege to their children (Westergaard and Resler, 1975). One can also see that in the Indian context education with its emphasis on screening excludes some sections as in the western societies.
1.21. Inequality in quality education

The existing educational system is not sufficient to meet the required qualitative and quantitative demands of the society. There exists a wide disparity in the quality of schooling that different groups of population receive. In the world countries in general and India in particular one notices the dual educational system—private education for privileged sections of the society and common or public system crowded by the weaker and depressed castes of the society. The qualitative differentiation among the public schools and private schools on the one hand and between public schools and special schools on the other hand are well recognized. Chitins (1975) provide some insights into the problem relating to the quality and standards of colleges crowded chiefly by scheduled castes and scheduled tribes vis-a-vis others.

According to Pinto (2000) there is a link between the poor allocation of funds to primary education and constant encouragement to higher education. He observes that the expansion of colleges has been on account of pressure from dominant social groups like ex-Zamindars, industrialists, local politicians and other pressure groups.

The changing patterns of education system in the context of globalization is undermining the ethos of equality of opportunities enshrined in the Indian Constitution which has recognized the prominent role of education for over all growth of the Indian society since Independence. In practice unfortunately the education system as a whole utterly failed to achieve the core objectives and goals of the constitution in relation to primary education (Pinto, 2000).
The progress of education among the lower castes and classes and particularly among scheduled castes seems to be very slow and halting. Even though the Government has taken up the cause of ameliorating the educational situation among the Scheduled Castes and Scheduled Tribes, the results have been far from satisfactory (Chitins, 1975; and Karlekar, 1975).

Sivakumar (1982) observes that the relationship between specific social origins (caste, income and educational) and student's attitudes did not, by and large, show any significant differences. Her study revealed that none of the social origin parameters were by themselves individually significant and at the same time any combination of various parameters produced different types of ethos, which were significant.

Naik (1970) vehemently criticizes the existing education system of India, particularly regarding the questions of equality of opportunities. He criticizes those Indian educational systems geared to the welfare of the upper and middle classes and serving the interests of these groups even to this date. Education has thus become a means in extending the status quo and continuation of privileges. This is working against the very philosophy professed in the Constitution.

1.22. Gender

Chanana (2002) while examining women in education pointed that the interface between the social institutions of family, marriage on the one hand and the larger and modern institutions like education and employment on the other have remained unexplored systematically. According to Chanana the social
transformation that has been taking place due to the private and public domain have begun to intersect the lives of educated individuals.

Tilak (1987) in his study 'the economics of inequality in education' found that the incidence of unemployment is higher among women than men at every level of education. It is due to lack of adequate and suitable employment opportunities for women and deliberate discrimination in the job market, which may be based on false or real notions of women's productivity. The discrimination against women at lower level of education might essentially indicate social and cultural discrimination where as at higher levels of education, labour market discrimination appears to be more important.

1.23. Motivational Factors

Students make decisions related to their work, educational activities etc. But the other persons, like parents, teachers, peer groups and relatives, make other important decisions. The most central of these are, first, where a student will be located in the educational system, and second, how far to continue once he is placed in the system. Further, the meaning that parents attach to education in general and specific streams of education in particular influences the preference of students. Sometimes, the meanings attached by parents to particular streams of education and the meanings the students attach to the streams may be conflicting.

Bidwell (1988) explains that the decisions have strong consequences for educational attainment because economic and political systems frame the educational opportunities that are possible for a student to realize through capacity
and effort. Therefore, as curricula become more divergent and as boundaries between streams or tracks harden, parents and educators, rather than students, make framing decisions increasingly, because each decision has become more consequential for everyone who has an interest in a students' educational trajectory.

Lastly, even students' own everyday decisions about academic efforts come more and more under parental and teacher's influence (at least in the upper reaches of the differential system), as these actors put pressure on students to follow through once the consequential framing decisions have been made (Bidwell, 1988).

In comparison with Britain, Europe, or Japan, in U.S.A. students are more likely to make the decisions all by themselves that frame their educational trajectories, and they are probably subject to relatively weak influence by parents and teachers when they make more immediate decisions about academic efforts (Bidwell, 1988).

As a result of structural-temporal properties of educational allocation, parents, officials of educational institutes are the dominant actors in taking decisions about where and for how long a young person will continue schooling and, at least in Japan, about how hard to work. Students have a relatively subordinate place as educational decision makers (Dore, 1976).

According to Parkins (1979) stratification implies not simply inequality, but a set of institutional arrangements, which guarantee a fairly high degree of social continuity in the reward position of family units through the generations.
The socio-economic status of parental households influences educational aspirations of students, their commitment to the student role, their educational achievement, their participation in co-curricular activities and their friends groups (Shah and Shah, 1998).

1.24. Language and educational opportunities

Language, a primordial means for communication, and dissemination of knowledge, is another source of inequality in Indian education. The constant encouragement and promotion of English as a link language by bureaucrats and academic elite led to perpetuation or institutionalization of English in elite institutions for upper class and middle classes of Indian society which extended already existing social differentiation and disparity through education (Kumar 1997).

He, further, explains that the fundamental difference between English medium private schools and Government run schools is the amount and quality of curricular material available to children.

1.25. Commercialization of Education

Xavier (2000) vehemently criticized the transition of Indian education system to produce IT professionals for the global market forces. He viewed that in the context of market economy, the advanced countries may take the globalization process in education for profit motive and transform it from an institution of knowledge to mere business.

The educational system of India before accepting the partnership with global market forces has to answer a few sociological questions: Is profit motive
overriding concern of the partnership? Are educational priorities kept in the forefront? What about the access factor? Is it only the affluent benefiting from the partnership brought about by globalization? How the access of the less privileged sections ensured? The above questions are of vital concern with regard to globalization in Indian education.

The foregoing account highlights that Indian education has been adopting a policy of inclusion and exclusion. Although the level of intensity has been changing in exclusion and inclusion due to historical, social, political and economic transformations, still exclusion is continuing in different forms.

Further, the organization of education is acting as means to limit access to some of the social groups, which are situated in urban settings and nearer to urban conglomeration, while majority of the rural students do not have ‘proper’ access to education particularly higher and professional education.

The position of individual or social group or a particular caste has a bearing for accessibility. According to this the traditional upper castes that have access to education since ancient times continued to dominate in the educational sector. For example, some of dominant castes such as the Kamma and Reddy in Andhra Pradesh became successful in gaining access to and control over the education system.

With the above backdrop the study argues that although scholars explored the importance of social economic and cultural factors in understanding access to educational system, sociologists have yet to look at the social roots of the recent
demand for Information Technology Education and its access to different social groups.

The aim of the present study is to explore social factors that determine access to IT education. How the socio-economic background, rural-urban origins affect the chances of individuals in gaining access to IT education? At the organizational level IT education organized in private institutions also seem to affect accessibility in terms of the affordability of IT education.

1.26. Scope of the Study:

The present study focuses briefly on the evolution of IT education and training in India in response to the global demands and also covers the effects of global slowdown on Indian IT education industry. The study broadly addresses the organization pattern of IT education and its implications for accessibility in India in general and Andhra Pradesh in particular.

It also presents a detailed analysis of the relation between the social background of aspirants and the access to IT education. The social differential indicators such as caste, income origins, rural-urban, gender background are selected to reflect social differentials. The attitudes and perceptions of the students on the IT education particularly in the context of the IT industry slowdown are also covered.

1.27. Perspective of the Study

Theory of social exclusion, founded upon the writings of neo-Weberain sociology developed by Parkin (1979), Collins (1986) and Murphy (1984) views
that the capitalist societies of West have been experiencing a shift in the nature of social exclusion.

Parkins (1979) observes “in modern capitalist society the two main exclusionary devices by which the bourgeoisie constructs and maintains itself as a class are first those surrounding the institutions of property, and second academic or professional qualifications and credentials. Each represents a set of legal arrangements for restricting access to reward and privileges. Property ownership is a form of closure designed to prevent general access to the means of production and its outcomes, credentials is a form designed to control and monitor the entry to a key position in the division of labour” (P. 47-48).

According to this conceptualization, social exclusion is individualistic in nature rather than ‘collectivist’. The entry to elite groups is attainable by all through an ‘open’ competition for credentials. Whereas collectivist approach to exclusion operates by the direct transmission of advantage to another group members on the basis of their origin such as caste, class, and gender.

The source of exclusion is not based upon the specific attributes of individuals but the generalized attributes of social collectivities (Crompten, 1993). To address the question of education and the occupational structure Collins (1979) has chosen social exclusion theory. According to Collins the changing relationship between education and the occupational stratification should be understood as a group conflict over scarce resources (Credentials, income, occupational status).

Due to the over dependence of the middle class on education as a means to professional occupations and as a source of reproducing social status and privileges
to the next generations, led to cutthroat competition in educational system. The changing recruitment pattern also emphasized upon occupational careers to acquire credentials through formal examination (Bourdieu and Passeron, 1990).

Brown (1997) viewed that in an elite system of higher education the possession of higher qualifications represent a passport into professional and managerial occupations. The reasons for the growing competition for credentials is due to the over emphasis of employers in selection of qualified graduates for recruitment. The over-supply of graduates labour has also accelerated the problem of ‘credential inflation’ (Dore, 1976).

Credential inflation also intensifies the competition for credentials from elite and most popular educational institutions, because degree holders stand ‘relative’ to one another in a hierarchy of academic and social worth. Even market gives priority to status credentials (Hirsh, 1977).

The process of acquiring the credentials or diploma and degrees in IT education acquired significant importance in the wake of the phenomenal growth of IT industry and IT enabled industries in India.

The private sector has taken the lead role in promoting and sustaining IT education industry in the country. It is quite important to understand the social-economic background of the social groups who have attached lot of significance to IT education.

The study assumes that the stratification system influences the extent to which access to IT education is equally distributed. Given this perspective, one can say that the degree of access to educational opportunities, especially at higher level,
is unequally distributed. The unequal distribution of access arises from structured social inequalities based on social stratification systems such as caste, class, religion, gender, region, and rural and urban distinctions.

1.28. Statement of the Problem

IT education and training assumes lot of significance in the context of growth of IT industry both in India and abroad to train the software professional as well as the work force associated with IT enabled industries such as medical transcriptions and call centres. The offshore business transactions of the multinational companies have been accelerating the growth of IT industry. The monetary benefits and social prestige associated with the IT jobs social groups of diverse background seem to attach lot of significance to IT education.

The study aims to understand how and in what ways the organisational structure (IT education in private sector) itself differentiates the pattern of accessibility. The private corporate initiatives in shaping IT education and training and its integration with world economy have larger implications for the diverse sections (IT education seekers and providers) associated with IT education.

The study primarily focuses on how organisation of IT education in private sector influence pattern of accessibility. It tries to analyse the relationship between the socio-economic background and degree of access to IT education.

1.29. Objectives of the Study

The objectives of the study are to
Describe the organisation of Information Technology education.

Describe the socio-economic profile of the students pursuing IT Education in private corporate institutions

Understand the relation between the social background of students and the degree of access to IT education and training.

To suggest alternatives in addressing the current problems in making information technology education accessible to wider sections of the society including disadvantaged social groups in the society.

1.30. Hypotheses:

There is variability in degree of access to Information Technology education among various social groups.

The variability in the degree of access to Information Technology Education is influenced by position of the social groups in the stratification system (caste, class, and gender).

1.31. Chapter scheme

The present study is organised into seven chapters. The first chapter dealt with the origin and growth of Information Technology and its far-reaching implications for various sectors with special focus on the development of IT education. The chapter also presented the perspective of the study, the problem and objectives of the study apart from the detailed review of literature. The second chapter deals with methodology and the concepts used in the present study. Chapter
three presents the organizational pattern of IT education both in formal and non-formal sectors of India and highlights the regional inequalities in the concentration of IT education and training centres all over the regions.

The fourth chapter provides the socio-economic profile of the students who primarily hailed from different social backgrounds and its consequent role in determining access to IT education and training. The fifth chapter shows the relations between the independent variables (social background variables) and dependent variable (the degree of access to differential levels of IT education). A systematic analysis is presented by blending the empirical data with the theoretical framework on social stratification and access to educational opportunities. The sixth chapter deals with the perceptions and anxieties of the students about IT education particularly in the era of downturn in IT industry. Seventh chapter provides a brief summary of the findings and conclusions that emerged out of the study.