CHAPTER – II

RESEARCH METHODOLOGY
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2.1: OBJECTIVES OF THE STUDY
Keeping in a view of the problem of research the present study is set out with the following research objectives as below:

- The study attempts to trace the growth of IT profession in India in general and Bangalore in particular.
- To portray and analyze the socio-economic profile of IT professionals.
- To assess and analyze the intergenerational and Intragenerational mobility of IT professionals.
- To analyze the problems of IT professionals and to study the impact of stress and strains generated while executing the professional responsibilities.
- To assess and analyze the socio-psychological impact of downward and upward mobility in the profession.
- To examine the impact of income, prestige and power generated out of profession on family, relations, kinship network. Investment expenditure structure and other social institutions like religion culture etc.

2.2 RESEARCH DESIGN

Research design can be thought of as the structure of research - it is the "glue" that holds all of the elements in a research project together. We often describe a design using a concise notation that enables us to summarize a complex design structure efficiently.

For any social science researcher the research design tells as to what steps to follow. It tells what steps are to be observed, how many observations should be made, i.e., what should be the size of the sample and how should the sample units be selected. It helps to locate the variables, and tells how to manipulate the...
variables. It also tells how to test the relationship among variables and which statistical methods are suitable to test the relationship. Finally it tells how to analyse the qualitative or the quantitative representations of the observations. It outlines the possible conclusions to be drawn from the analysis.

Research Design According to ‘Jahoda and Selltiz’, A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure.

Research Design according to F.N. Kerlinger is the plan, structure and strategy of investigation conceived so as to obtain answers to research questions and to control variance.

Hence, by knowing the theoretical base of the research design this research study is designed as follows

Chart No: 2.1
RESEARCH DESIGN

2.3 : RESEARCH METHODOLOGY.

The present study is an attempt to examine the sociological study of IT profession. It has been carried out in the state of Karnataka, especially in Bangalore IT companies. Very few studies on IT professionals in India from sociology of profession perspective have been done so far. Few studies have been
done on role and practice of IT profession rather on the professional orientation and professional commitment. None of the studies give a complete picture of IT profession. Few studies by and large with the exception of a few, have analysed the IT profession without giving importance to the attitudes of the IT professionals and their role of work and the problems they face in society, family, workplace and so. Their orientation towards IT professionals in terms of expectation, satisfaction, stress, strain and other sociological dimensions, that need to be analysed for a proper perspective of the IT professionals. The behaviour of the IT professional largely influenced by the nature and pattern of profession they practice. It is envisaged that the core of the profession

The present study revolves round the study of IT professionals based on empirical data collected through fieldwork however necessary secondary data is also incorporated in the study. The core issue, with which, the present study is concerned, with the examination of the different aspects of IT professional parameters with that of general characteristics of profession and to bring out the similarities and differences between the IT profession and profession in general. Along with this perspective the study is basically oriented to understand the dynamics of IT profession vis-à-vis society.

The present study attempts to examine the practice of IT profession of 300 IT professionals who are engaged in variety IT related professions. The IT profession is relatively new and an emerging profession. The various kinds of social and cultural adjustments are needed; support of family and the layer kinship network are essential elements, which constitute to the support of IT professionals in caring at the professional tasks.

We attempt to examine the IT professionals in the context of work and their role vis-vis family and other kinship network. Our sample includes IT professionals from different IT related jobs. As there is a large presence of women
in IT sector our sample includes 50% of women IT employees. Various tested scales are used to elicit, responses from IT professionals regarding functional role stress, modernisation attitude scale job satisfaction questionnaire, and socio-economic inventory are used.

2.4 THEORETICAL FRAMEWORK AND PERSPECTIVES

Modern societies seem to depend more and more on the work and the knowledge of individuals and groups that consider themselves to be professions and are considered professions by others as well. Sociologists, historians, and other scholars of society have become interested in understanding this phenomenon. They have studied professionalism and professionalisation. In short, most authors of the classic work of the professions try to understand the general phenomenon. Further, most authors assume that professions grow through a series of stages in a process called professionalisation.

Recent work on the professions challenges the classic work. For instance, Magali Sarfatti Larson (1990) suggests replacing a general theory of professions with a focus on expert knowledge: "it is less productive to work towards a general theory of professions than it is to think of questions which go beyond the professions and address the larger and more important theme of construction and social consequences of expert knowledge".

It has also been suggested to understand professionalism as discourse. For instance, Larson (1990) argues that it is "the production of 'learned discourse' and its implications for the professional phenomenon" which must be considered in how that discourse legitimizes expert knowledge.

In the Larson's insights and connected them with the work of Bourdieu, By using Bourdieu's work, the notion of professionalism is shifted from an evolution towards a trajectory that has its own logic in each case where an occupation
develops a learned discourse. Following Bourdieu, it is suggested to see professionalism as a social strategy of intellectuals who believe that being a profession involves cultural capital convertible into economic or symbolic capital capable of increasing the status of the profession in society (Ingólfur Ásgeir Jóhannesson 1993a).

Bourdieu's remarks on theories of professionalism go along those lines. According to him (in Bourdieu and Wacquant 1992), professionalism is "a folk concept that has been smuggled into scientific language. The concept has become "real" as it "grasps at once a mental category and a social category, socially produced only by superseding all kinds of economic, social, and ethnic differences and contradictions which make the 'profession' of 'lawyer,' for instance, a space of competition and struggle". Bourdieu suggests looking at professions and "professional" and expert work as a "structured space of social forces and struggles", a social field in which there is a competition for what counts as capital.

Professionalism has indeed become the main way to institutionalize expertise in industrialized countries. Abbott has extensively studied professionalism, for instance in his 1988-book, The System of Profession. An Essay of the Division of Expert Labor. He uses concepts that are useful to understand how the Bourdieuean metaphors of space and capital can be used to understand professionalisation. He suggests looking at the expertisation of work and struggles over jurisdictions of expert work to understand the "professionalisation" of a given group. He points out that "professions" (i.e., what members of such professional groups and others normally call professions) develop when jurisdictions become vacant; groups of expert workers can convert their work and knowledge into a currency. They can present their expert work as different from other expert work. In turn they can claim an expert status besides other expert groups (occupations, professions). Abbott argues that abstract knowledge systems are the most important currency of competition between
professions. This is the same basic idea as Bourdieu's: expert labor must be converted into symbolic capital to assume the expert status in society.

The theories that have briefly outlined contrast with traditional professionalisation theories that suggest professionalisation as an evolutionary trend (e.g., Hoyle 1980/1969, Parsons 1954/1939, Wilensky 1964). Abbott (1988) has analyzed five basic assumptions hidden in the concept of professionalisation as he has synthesized it from the classic work on the professions.

- First, these theories see change as unidirectional; professions evolve to a given form.
- Second, each profession has its own independent evolution; that is, the classic theories place little emphasis on how the professionalisation of one profession impacts another profession's evolution.
- Third, the social structure and cultural claims of professions are analyzed, not the work the professions perform or the expertise that distinguishes them from others.
- Fourth, professions are, more or less, seen as homogeneous units.
- Fifth, the classic theories do not focus on the possibility that professionalisation processes might change with time; they tend not to see the history of themselves as theoretical discourse. Abbott (1988, 17–18) notes that this is a summary; no theory, no author has made exactly these points. For instance, one of the chief professionalisation theorists, Larson, has challenged point number five (e.g., 1977, 1990). However, Abbott contends that this summary is fairly accurate.

Abbott (1988) has discussed why scholars of the professions have focused on the organizational patterns of the professions, rather than the actual work they perform. He argues that because "professions like medicine and architecture seemed more similar in organization pattern than in actual work made
organizational pattern the focus of analysis" (1). He continues that this focus on pattern has "implied ... a search for its origin and led to the idea of a common process of development ..." (1). To account for the fact that not all occupations may receive professional status, the concept of semi-proessions has been invented (e.g., Etzioni 1969).

Abbott (1988) argues that the chief sociological question about the professions should concern how societies structure work and expertise—rather than on organizational patterns or the division of labor in general. He asks why societies "place expertise in people rather than things or rules" (323). One of the tentative explanations includes the observation that "knowledge is too extensive for part-time work" (323). Questions like, when do we use experts and for what?, are more important than to find a universal definition of professional work. (Among other works in a similar vain is the work of Eliot Freidson, e.g., 1986).

To study what constitutes IT professional's kind of expertise, theoretically and practically, is more interesting than to focus on their meant powerlessness—as theories of organizational patterns and theories of semi-professions tend to do. The expertisation of IT profession work may indeed lead to a professional status comparable with architecture, law or medicine. Still IT profession is expert work to be analyzed as such.

2.5 OPERATIONAL DEFINITIONS

*Profession*: An occupation based on systematic, formal knowledge about a particular field (such as law) and involves high levels of autonomy and codes of conduct formulated and administered by other members of the occupation.

Profession in general sense, it's an occupation that requires extensive training and the study and mastery of specialized knowledge, and usually has a professional
association, ethical code and process of certification or licensing. Examples are law, medicine, finance, the military, nursing, the clergy and engineering.

**Profession:** In the strictest sense of the term, refers to a high status occupation which is composed of highly, trained experts performing a much specialised role in society.

**G. Millerson (1964) lists these characteristics of a profession:**

1. The use of skills based on theoretical knowledge.
2. Education and training in these skills.
3. The competence of professionals ensured by examinations.
4. A code of conduct to ensure professional integrity.
5. Performance of a service that is for the public good.
6. A professional association that organizes members. These criteria can also be used to measure degree to which occupations are professionalized.

**According to Parsons (1939)**

"I conceive a profession to be a category of occupational role which is organized about the mastery of and fiduciary responsibility for any important segment of a society's cultural traditions including responsibility, for its perpetuation and for its future development. In addition a profession may have responsibility for the application of its knowledge in practical situations."

**According to Greenwood (1962)**

"Professionalism is one that views a profession as an organized group which is constantly interacting with society that forms its Matrix, which perform
its social functions through a network of formal and informal relationship and which creates its own sub-culture requiring adjustment to it as a pre-requisite for career success.”

According to Parry and Parry (1976)

“A strategy for controlling an occupation in which colleagues set up a system of self government.”

According to Cheek (1967)

“Professions are those occupations which involve the use of knowledge and technique by practitioner directly upon or a behalf of a client in order to maintain or induce in the client a culturally determined and socially approved state of well being.”

2.6 HYPOTHESIS

This particular study attempts to test the following hypotheses which are emerged out of study objectives the fastest one.

- The status of the IT profession is so high compared to other professions.
- Among it professionals intra generational mobility is higher than intergenerational mobility
- IT professionals undergo heavy psychological stress and strains in their work
- IT professionals encounter stress and strain in maintaining balance between family and work place
- Higher the number of dependents more is the stress on IT professionals.
2.7 UNIVERSE OF THE STUDY

The universe of the proposed study is the area undertaken for the study by the scholar to understand the IT profession in general and the problem and prospects in particular. The study is purely confined to IT professionals employed in IT sectors both in private and government sector. It includes hardware as well as software and IT enabled professionals who are working in Bangalore IT companies.

The present study is a 300 sample size of IT professionals who are working in IT industries and companies in Bangalore. It comprises both the sexes (male & female).

As it was very difficult to obtain the exhaustive list of IT professionals working in Bangalore, a representative procedure and the purposive samplings was employed in the present study. This sample includes and represents all the categories of IT professionals which constitute our universe.

2.8 AREA OF THE STUDY - BANGALORE

In India the state Karnataka holds the pre-eminent position in the information technology sector. In fact, the state is called as silicon state, and its capital Bangalore is well known as 'IT capital of India'. The United Nations human development project report ranks Bangalore as the fourth best technological hub in the world only after Silicon Valley, Boston and London. Today this city is a home pride for about 3 lakh IT professionals. The city Bangalore is the vibrant pool of talented scientific professionals, rich technology cluster, cosmopolitan environment, salubrious climate, that has created atmosphere which is continuously attracting significant investments from Indian and overseas companies.
The city is seen as a major destination for multinationals to start their operations. Besides housing one third of the nation’s InfoTech manpower, the city also offers plug-and-play system for any start-up, so that there is no time lost in starting operations.

COURTESY: www.mapsofindia.com

Bangalore is situated at an altitude of 920 meters above the sea level; Bangalore is the principal administrative, cultural, commercial and industrial centre of the state of Karnataka. The city, which is spread over an area of 2190 square kilometers, enjoys a pleasant and equable climate throughout the year. It’s tree – lined streets and abundant greenery have led to it being called the ‘Garden City’ of India. However, since local entrepreneurs and the technology giant Texas instruments discovered its potential as a high-tech city in the early 1980’s, Bangalore has seen a major technology boom. It is now home to more than 250
high-tech companies. Including home grown giant companies like Wipro and Infosys. Consequently now Bangalore is called the ‘silicon valley’ of India.

2.9 SAMPLING TECHNIQUE AND THE SAMPLE

A sample is a finite part of a statistical population whose properties are studied to gain information about the whole (Webster, 1985). When dealing with people, it can be defined as a set of respondents (people) selected from a larger population for the purpose of a survey.

A population is a group of individual persons, objects, or items from which samples are taken for measurement for example a population of presidents or professors, books or students.

Sampling is the act, process, or technique of selecting a suitable sample, or a representative part of a population for the purpose of determining parameters or characteristics of the whole population.

To draw conclusions about populations from samples, we must use inferential statistics which enables us to determine a population’s characteristics by directly observing only a portion (or sample) of the population. We obtain a sample rather than a complete enumeration (a census) of the population for many reasons. Obviously, it is cheaper to observe a part rather than the whole.

A stratified sample is obtained by independently selecting a separate simple random sample from each population stratum. A population can be divided into different groups may be based on some characteristic or variable like income of education. Like any body with ten years of education will be in group A, between 10 and 20 group B and between 20 and 30 group C. These groups are referred to as strata. You can then randomly select from each stratum a given number of units which may be based on proportion like if group A has 100 persons while group B has 50, and C has 30 you may decide you will take 10% of each. So you end up with 10 from group A, 5 from group B and 3 from group C.
For the proposed study of IT professionals the data was collected through representative purposive sampling method. As the world in these days seems to be an IT world many companies have situated with different mode of design works in the IT sector. Ranging from a small office in the house to the multinational companies. Since the study is in general of IT professionals without sticking to only few companies. Hence out of all these companies and sectors stratified random selections of 300 professionals are interviewed for the study representing different category of IT professionals.

2.10: SOURCES OF DATA AND METHOD OF DATA COLLECTION

For any research the data becomes an important aspect in revealing the results of the research for the present study the sources of data has been collected through two forms i.e. from primary source and the secondary sector. For the present study data has been collected both from primary and secondary sources. The primary data is collected from the fieldwork through interview schedules like, structure and semi-structured schedules.

The Secondary sources will include books, journals, newspapers, official reports, and proceedings from the department of information technology of central...
and state government of India. Data will also be collected, through Internet, where it is necessary.

**a) Primary Data**

The primary data is obtained from extensive field work. The structured scales or the structured questionnaires were used to collect the primary information for the present study. The data has been collected from IT professionals from various IT companies in Bangalore. Different categories of IT professionals were interviewed for the study.

**b) Secondary Data**

The secondary source or the data which is already available is obtained from the various Journals, daily newspapers, research materials, thesis published, I T professional’s forum Bangalore, various books.

### 2.11: SCALING TECHNIQUES AND DATA COLLECTION TOOLS

In the present research the researcher has used the various scaling techniques to obtain the relevant data. The scaling techniques are much better than that of the normal questionnaire. Few such research scaling techniques which are used for the study are as follows:

1) **The title of the scale is “Socio – Economic Inventory” (SES)**

This scale is developed by R.P.Kallinath of University of Bombay. The purpose of the scale is to measure the socio-economic status of individuals. Concerned to uses of the scale – The inventory is a useful to appraise the social standing or social position of an individual.

The main feature of the scale is it assess the socio-economic status of individuals on the following criteria: Type of family, number of family members
in the society, type of accommodation, facilities and services available at home, articles and gadgets possessed, total monthly income, literacy level of parents, spouses, occupation of parents / spouses, exposure to media and club memberships, interaction among social, economic and political issues. The inventory consists of nine items each of which has subcategories. The scoring key furnishes details of the method of scoring.

2) Job Satisfaction Questionnaire: This scale is developed by "Shailendra Singh". It's of five point scale. This is used to diagnose the level of job strain in the companies.

   The main feature of the scale is it is a 14 item questionnaire consisting of both positively and negatively keyed items, in which each statement is rated on a 5 point scale in all three dimensions of job strain, is measured.

3) Functional Role Stress Scale: These scales are developed by the Naming A.K.Srivastava and A. Krishna, Hindu Banaras University. The scale is used to assess the extent of functional (facilitating or desirable) stress relating to Organisational or job roles.

   The main feature of the scale is, it comprises of 25 statements (items) relating to 5 dimensional of job role, namely, excessive responsibility; responsibility of others; excessively large work load; making decision that affects others; perceiving oneself not fully qualified and competent; and strenuous tasks bringing recognition and personal growth. All the items in the scale are true - keyed and to rated on five point scale.

4) The title of the instrument is "Modernisation Attitude Scale": This scale is developed by B.M. Mathur. The purpose of the scale is to study the adults towards various facts of modernisation.
The main feature of the instrument is it contains 35 items with basically five aspects viz; social mobility, Position of women, family planning, marriage, religion and superstition: developed on the lines of “Thurston Scale”

5) The title of this instrument is: Social and Family Role Stress Scale. (SFRSS). It is developed by Prof. S.Sulthan Akthar and Priti Vadra.of Aligarh University. The purpose of this scale is to measure stress emanating from social and family situation. The scale is used in much boarder areas. No tool exists for the measurement of extra Organisational stressors. The present one will be great use for classifying people under stress. Its uses are for research and classification.

The main feature of this particular scale is, it is just like Likert Type, 5 poin rating scale. It consists of 25 items covering social and family areas.

6) One more important scaling instrument which is used for the present research is “Intercaste Marriage”. The scale is developed by B.A. Parikh and others. The scale is used to find out the attitudes of the younger generation as well as the parents for Intercaste marriages.

The main feature of the scale is: for each statement in the inventory for measurement of attitudes for Intercaste marriage the subject had to choose any one of the six categories of responses arranged in a progressive manner showing from most negative to most positive direction of the attitude.

In addition to these scales the questionnaire schedule was prepared to measure the professional’s skills of an IT professional and was administered to obtain the data regarding professional skills.
2.12: DATA PROCESSING, ANALYSIS AND PRESENTATION

We are well aware that the complexity nature of the data which is found scattered and also in vague. Various methods of data collection are utilised to obtain the relevant data for the present research.

For the present research study, the methods of data collection used are the scaling techniques or the structured questionnaires and the interview method. All these are used one at a time or all are used.

The researcher followed the scaling techniques by using the structured questionnaires to obtain the data for the research.

The research scholar had long sessions of discussions with the IT professionals, Officers of the department of information Technology Bangalore, ITPF chairman of Bangalore Chapter, ITPF chairman of Chennai Chapter, ITPF chairman of Hyderabad chapter. The scholar even consulted some of the professors of various universities who are specialised in the field of sociology of profession. The discussions were conducted to know the other side or the views regarding their profession in information technology. The discussions provided various range of information, their total concern about the conditions of the IT professionals and the IT profession. The discussions with the concerned officers of ITPF people had fruitful results, which yielded good results thus are much helpful for the research study. Detailed notes were made during these sessions, which were supplemented and cross-checked authentically.

2.13: IMPORTANCE OF THE STUDY

As our world transgress into the twenty-first century, our approach to information, life and culture, education, business and many untouchable things are changed by the swift turn of new technology. We move into a world where we depend heavily on technology support our daily lives. We need computer systems
to protect our nation’s critical infrastructures, database to maintain our world stock market, or a computer network for research training and interaction. In economic terms, they become our needs and not our wants anymore. Computers can maintain our needs in life, but who can maintain them? The answer is the countless Information Technology Professionals, who work diligently to maintain all of these structures. The IT profession is an important supporting force behind the computer structures we see, but the IT professionals are still considered as “second class citizens”. Although the IT profession can lead to successive self satisfactions of accomplishment, it can also indirectly lead an individual into a life of depression, full of worries, stress, strain and work load pressures.

2.14: CONCLUSIONS

The chapter II is devoted to research methodology. In this chapter we have explained the research methodology developed for the present study along with universe, sample, method of data collection and other important aspects related to steps of conducting research.

In the next chapter we attempt to portray the socio-economic profile of IT professionals
2.15: REFERENCES


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