CHAPTER III

SCOPE AND METHODOLOGY

3.1 Introduction

3.2 Database

3.3 Selection of study region

3.3.1 Location

3.4 Sample Design

3.5 Pre-testing

3.6 Pilot study

3.7 Techniques of analysis

3.8 Importance of the study

3.9 Limitations

3.10 Terminology
CHAPTER III

SCOPE AND METHODOLOGY

3.1 Introduction

It has been observed from the foregoing chapters that women’s education is indispensable for the development of a nation. Initially planning strategies at all levels were gender ignorant, but after realising the consequences of the same, gender empowerment has become the main point of focus of studies and strategies whose aim is overall development and welfare. This work concentrates on the aspect of gender empowerment that takes place through education of women. But it is universally acknowledged that education brings both economic returns and non-economic returns. In India we find a lot of diversities in each and every spear of life. We find states like Kerala, Mizoram and Meghalaya are not only having high literacy rate but also a very high female literacy, lesser infant mortality rate and a very less gender gap which are indicators of modernisation and development. At the same time we also find states like Rajasthan, Bihar, Uttar Pradesh and Madhya Pradesh not only have a low literacy rate but very low female literacy, high infant mortality rate, less female advantage and a very big gender gap. This indicates the lack of recognition and privilege to female sex. With this view in mind the present
Study was taken up to make a critical analysis of the socio-economic aspects of women's education.

The present study is an attempt to determine the various socio-economic implications of women's education. It probes into the employment aspect, social awareness, consumer orientation and the overall role played by women in enhancing socio-economic status of the family due to education.

### 3.2 Database

The data for the study is from the primary source. The data has been generated by the researcher with the help of the responses obtained by sample respondents as expressed in the questionnaire-cum-interview schedule. The data pertaining to the financial year 2000 was collected during the first quarter of the year.

The work is also supported by secondary data published by various official sources like the Registrar General of India, World Bank, Central and State Ministries, Institute for Applied Manpower Research, United Nations Development Project. Further the work is fortified by the information gathered through various interviews and informal discussions held with educationists, sociologists and economists.
Selection of study region

India\(^1\) has a total land area of 2,973,190 sq km. It is comprised of twenty six states and six union territories. Karnataka\(^2\) is one of the southern states of India. It has a land area of 1,91,791 sq km that accounts for 5.83% of the total geographical area of India. The population of the state according to 1991 census was 44,977,201 with 22,951,917 males and 22,025,284 females.

Karnataka State ranks eighth among the states and union territories in the Indian Union both in respect of area and population and nineteenth in respect of literacy as per 1991 census report. Its female literacy rate is 44% and that of males is 67% total being 56.04%. It ranks twenty-first in female literacy and nineteenth in male literacy in the Indian Union.

The new Bangalore District came into existence on 15\(^{th}\) of August 1986 with the division of erstwhile Bangalore District into Bangalore Rural and Bangalore Urban Districts. It is the smallest among the districts of Karnataka State with an area of about 2,191 sq km sharing only 1.14% of the State’s area. But in population it stands first with 4,839,162 persons as per 1991 census comprising 2,542,950 males and 2,296,212 females. Thus Bangalore district, which is the smallest in area, has highest population and density (the average

\(^1\)http://leweb2.loc.gov/cgi-bin/query/r?frd/cstdy:@field(DOCID+in0007)

\(^2\) Karnataka State Gazetteer – 1983-93, Chapter 1, General, pp. 1.
umber of persons per square kilometre) among the districts in the State. The density of Bangalore district, that is 2,203 is due to Bangalore Urban agglomeration area that accounts for 85.16% of the population of Bangalore strict. It is the sixth largest Urban Agglomeration in the country as per 1991 census report. Bangalore Urban district has three taluks, namely, Anekal, bangalore North and the Bangalore South. Bangalore Urban comprises bangalore City and is a part of the Bangalore North and Bangalore South taluks. Being the headquarters of the state, the city is the chief administrative centre clustered with numerous State and Divisional level Government department and offices associated with the legislative, executive and judiciary wings of administration.

Manufacturing industry enjoys a pivotal place in the economy of the bangalore Urban district. Many prestigious Central Government industries are housed here. The number of registered factories in the district stood at 10,721 including 15 which are large and medium scale industries. The industrial units have come up during the last three decades, especially in the private sector are numerous. Agarbatti manufacture is an important household industry which holds key role in the exports of the same. Bangalore is known for looms including powerlooms. The unique position attained by trade and commerce is another characteristic feature of the district. It is a prominent trading and commercial centre. Bangalore City is also a major centre of banking industry.
Transportation and storage as well as communication sectors also make a significant contribution to the economy of the district. The Bangalore city is one of the major stations on the railway network of the country both in respect of passenger and goods traffic. Bangalore is linked with several important places by a good network of roads. The city is also on the air map of the country and it is an important tourist centre attracting people from all over the world. Hotel and catering industry has admirably responded to the challenging task of providing the necessary services to the tourists of every standard and attending to the needs of the floating population. The city has most important Government Offices and innumerable educational institutions including technical, hospitals and nursing homes, service organisations and associations that provide livelihood to a considerably large proportion of the city dwellers. It is the nerve centre of various religious, social and cultural organisations and movement as well as activities. It has served as a venue for several social and cultural activities of local, regional as well as of national and international importance.

More recently the information technology and garment industries hold a major position in the economy of the district. Bangalore once a garden city has now gained the popularity of being the Silicon Valley of India. It has become a gateway to styles of globalised consumption. Further Human Development Report of Karnataka in 1999 indicates highest female literacy and least gender
gap in Bangalore Urban as on 1996. Therefore it is relevant to choose and study a region like Bangalore city with reference to the above objectives. Thus the present work makes an attempt to study the attitudes and socio-economic factors influencing and being influenced by educational status of women living within the limits of Bangalore City.

3.3.1 Location. Bangalore district is located in the south-eastern corner of Karnataka State. Spanning a geographical area of 2,191 sq km, the district lies stretched between the latitudinal parallels of 12-39° north and 13-18° north and the longitudinal meridians of 77-22° east and 77-52° east. The maximum distance from the southern tip to the northern tip is about 58 km and that between the western and eastern tips is about 50 km. The district lies in the southern maidan region of the state and lacks natural barriers. While on the north, west and south Bangalore district is surrounded by Bangalore Rural district on the and east it is bound by Dharmapuri district of Tamil Nadu.

3.4 Sample Design

The universe studied here is Bangalore city. Bangalore city comprises of a few parts of both Bangalore North and Bangalore South of Bangalore Urban. It has a population of 28,23,360 of which women constitute 13,47,118. While males comprise 52.29% of the city’s population females form only 47.71%.
Further according to official reports of Bangalore Mahanagara Palike\textsuperscript{3}. Bangalore City comprises a total of 20,11,037 literates of which the number of literate women is 8,86,790. Of the entire population of the Bangalore City only 31.41% females are literate and they comprise 44.10% of the total literate population.

Hence, a sample of 300 which forms one three-thousandth of the total literate women in Bangalore city, was selected. Information required for the study was collected through a field survey. The data was collected with the help of a questionnaire-cum-schedule prepared with reference to the objectives of the study.

The sample comprises of women in Bangalore city between the ages 18 and 58 years, with varying levels of educational qualification with any employment status. Care was taken to see that women beyond 18 years of age and still pursuing full time formal education were kept out of the survey, because the study deals with the consequence of women’s education once their formal training is over (irrespective of the level of formal education). Further only one respondent was allowed to participate from each household to avoid repetition of data regarding household.

\textsuperscript{3} Bengaluru Nagara Jilleya Anki Amshagala Nota, Bangalore City Corporation, 1997-98.
Foreseeing problems in the way of collecting data, though a sample size of 300 was proposed, 350 schedules were distributed. Of this 317 responded schedules were chosen for the purpose of analysis, as these were complete in all respects.

To start with, samples were selected by simple random sampling method. Later the collected data was grouped based on the requirements of the study. Definition of groups in various chapters have been discussed below -

Data revealing the socio-economic factors influencing the attitude of women towards attaining education are treated as follows - The raw data contained respondents from thirty three different types of qualification. They were then stratified into ten groups without distorting the actual educational levels. Respondents with qualification levels from first standard to ninth standard were put under 'less than SSLC' category. While all with tenth standard and equivalent were put under 'SSLC' category. Those with eleventh, twelfth and TCH were clubbed together to form PUC group. All with post SSLC job oriented courses, diploma and ITI courses were grouped as 'diploma' category. Respondents with just a degree (non-professional) such as B.A., B.Com., and B.Sc., were put under ‘degree’ category. While those with non-professional degree and an additional degree or course (not equivalent to a master degree) were grouped under ‘degree plus’ category. While all with professional degree like B.E., B.Arch, M.B.B.S., B.A.M.S., B.Tech., B.D.S.,
M.B.A., M.C.A., C.A., ICWA, M.E., M.S., M.D., were put under ‘professional degree’ category. Further all non-professional master degrees like M.A., M.Com., and M.Sc., were grouped under ‘masters’ category. While all with M.Phil from various faculties are grouped under ‘M.Phil’ and similarly all doctorate degree holders irrespective of their field are clubbed under ‘Doctorate’ category. Thus the study has ten levels of educational qualification.

Since age is an important factor with reference to any study, the respondents are categorised under - young (18 to 35 years), middle (36 to 45 years) and senior (46 to 58 years) age groups.

Stratification of father’s and mother’s qualification (parental qualification) is done using the same basis as it is done for respondent’s qualification. To know the profile of respondents they were classified with reference to their i) regional background - rural, semi urban and urban categories, (ii) kind of institution - government, missionary, private and public (iii) medium of instruction - English, Kannada, Hindi, Tamil (though not regional, national or link language Tamil is categorised separately because many respondents mentioned Tamil as their medium of instruction) and others (languages other than the four mentioned above) (iv) mode of financing education -under ‘free’, ‘parents’ financing, those financed with ‘scholarships’ and ‘self’ for those who financed their studies with their own earnings.
To analyse the relationship between educational status and employment aspect of respondents they are classified under different occupational groups like - officer, lecturer, teacher, journalists, clerk, maid servant, business, consultant, professional and housewife based on the qualification and designation as mentioned by respondents in the schedule. Respondents were classified on the basis of their work organisations such as - bank, government, MNC, private sector, public sector, quasi government, self employed and unemployed.

For the data relating to social awareness among respondents stratification is done with reference to their employment status of respondents as ‘not working’ for those who are unemployed and as ‘working’ for those who are employed. Again respondents are classified based on their family income and self -income (using $x = \text{mean} \pm 0.5 \sigma$). Under family income we have three categories - low (whose monthly income is less than Rs. 15,014), middle (whose monthly income is between Rs. 15,014 and Rs. 27,296) and high (whose monthly income is higher than Rs. 27,296). In the same way respondents are grouped based on their income (personal income) under four categories - low (whose monthly income is less than Rs. 5,563), middle (between Rs 5,563 and Rs.12,878), high (whose monthly income is higher than Rs.12,878) and no income (inclusive of respondents who come under ‘not working’ or ‘house wife’ category, those not having any income of their own).
Further, social organisations were categorised based on the functions performed by them with which the respondents are associated.

For the data reflecting the role of women in enhancing socio-economic status of their family stratification is done from i) up to 25% ii) 25-50% iii) 51-75% iv) greater than 75% and v) nil, based on the extent of monetary contribution made by respondents towards monthly household expenditure.

Stratification is also done with reference to the locality of residence of respondents based on six zones, Zone -A,B,C,D,E and F as specified by the Bangalore Mahanagara Palike, Property Tax Self Assessment Scheme - 2000. A seventh group Zone-G is labelled against the Outgrowing Bangalore Category. For the sake of convenience in analysis for the real estate possessed by the respondents outside the city limits of Bangalore are categorised as H - Bangalore (rural), I - anywhere in Karnataka other than Bangalore, J - outside Karnataka and within India.

For data pertaining to spending pattern and consumerism among respondents, classification is done on the basis of amount of monthly credit purchase made by respondent families as - nil (those who have not yet used a credit card or so far have not made any credit purchase), varies (those who could not approximate their monthly credit purchase) and brackets ranging from Rs.500 to greater than Rs.5000. Further, the purposes for which credit purchase are made are classified under emergency, durables, clothes, hotels etc.
3.5 Pre-testing

To ensure that the data from the schedule adheres to the objectives of the study a pre-test was conducted. It was done with 10 percent of the actual sample size. Thus, 30 schedules were randomly administered to respondents satisfying all the criteria to become members of the sample.

3.6 Pilot study

The objectives of the pilot study were 1) to find if questions are relevant to the objectives of the study and whether the questions needed any rewording or be dropped altogether. 2) to find if the alternative choices provided as responses to the questions are appropriate and exhaustive 3) to find if statements are controversial or too sensitive to answer 4) to find if any grave omissions are made and 5) to budget in terms of both time and cost for the final study. The data collected was analysed to check the adequacy of the framed schedule.

The shortcomings of the schedule were corrected and a final schedule was prepared and used for the analysis.

3.7 Techniques of analysis

The data collected was stored in the Microsoft - Excel format. Tabular analysis is used extensively to arrive at results of the study. To know the
direction and extent of relationship between variables, simple tools like Pearson's Correlation Coefficient and simple linear regression estimated by the Method of Ordinary Least Squares (OLS), were adopted. Further, non-parametric tests like Chi-square and t-test were used to analyse the statistical significance of the results obtained.

Sample regression equations used are of the form

\[ Y = a + b_1 x_1 + b_2 x_2 + \ldots + b_n x_n \]

where \((a, b_is)\) are the constants to be estimated.

The regression coefficients are tested using t-test where t-statistic is

\[
t = \frac{x - \mu_o}{s} \sim t_{(n-1)}
\]

where,

\[
s^2 = \frac{\sum_{i=1}^{n} (x_i - \bar{x})^2}{n - 1}
\]
The significance of association $\chi^2$ is calculated using

$$\chi^2 = \sum_{i=1}^{n} \frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

where, $O_{ij} =$ observed frequency of cell in $i^{th}$ row and $j^{th}$ row  
$E_{ij} =$ expected frequency of the cell in $i^{th}$ row and $j^{th}$ column

and Expected frequency of any cell

$$(\text{Row total for the row of that cell}) \times (\text{Column total for the column of that cell})$$

$$(\text{Grand total})$$

The degrees of freedom is worked out as follows:

d.f. = $(r - 1) (c - 1)$ where $r -$ means number of rows and $c -$ means number of columns

Level of significance is fixed at 0.05 level.

Further $R^2$ the Goodness of Fit is estimated.

The Correlation Coefficient is found by using –

$$r(x, y) = \frac{n \sum_{i=1}^{n} x_i y_i - \sum_{i=1}^{n} x_i \sum_{i=1}^{n} y_i}{\sqrt{n \sum_{i=1}^{n} x_i^2 - \left(\sum_{i=1}^{n} x_i\right)^2} \sqrt{n \sum_{i=1}^{n} y_i^2 - \left(\sum_{i=1}^{n} y_i\right)^2}}$$
3.8 Importance of the study

The importance of education of women has been underscored in our human development strategy. Women are being called upon to shoulder a greater responsibility in day to day life. It is in this context that education of women has to be studied, to understand how it impacts their socio-economic status.

A study of the present type is relevant, for it tries to know the factors influencing women’s education. It finds out the major determinants of unemployment and employment among women of various educational statuses.

It aims at finding the economic and non-economic consequences of women’s education on herself and also on the family - like her contribution to household expenditure, her health status, her spending pattern and consumerism, family health scenario etc. It throws light on her social awareness, her social involvement, environmental concern and the manner in which she uses her leisure and her role in decision-making in the family.

3.9 Limitations

Due to paucity of time and resources the study does not include every single cross-section of educated and working women, hence generalisations are made pertaining only to the groups in the sample.
Though care has been taken to ensure correct responses, it is possible in some cases, due to errors in recalling the respondents may have given wrong data, which could affect the accuracy of the results. But care has been taken during data collection to minimise such errors.

Income and savings being sensitive issues, respondents may not have been forthright in their responses.

Many results were arrived at using ‘others’ category for most of the questions. This is because the responses were too diverse that they could not be generalised and categorised.

Though the study concentrates on the socio-economic aspects of women respondents it is not focussing on aspects like sexual harassment, dowry and other social problems victimising women nor on their political participation.

3.10 Terminology

AAUW – American Association of University Women.
AC – Air Conditioner.
Additional course – Courses other than those mentioned in the stratification.
Aqua guard – Though aqua guard is a brand name here it means electrical water filter attached to the source of domestic water supply.
Autorickshaw – A three wheeler run by private parties as a complementary to public transport.

Boilfilter – Boiled and filtered water.

Borewell – A closed well drilled underneath the earth to provide water. Also known as tubewells. Water is drawn to the surface either by mechanical power or by electric motors.

CRY – Child Relief and You – Organisation providing shelter, food and education to orphanded children in a home like atmosphere.

Darshini – Self service canteens and mini hotels where food is provided over the counter to eat on the spot or to go.

Dhabha – Any roadside hotels providing food at a cheaper rate.

High school – Equivalent to Secondary School – Stage of formal education after completing primary level of education.

MNC – Multi National Corporations.

NSS – National Service Scheme – National Level Organisation of India involving youth in various social service activities.

Personal income – term alternatively used for respondent’s income.

Post Graduation – degree plus and master degree courses are together termed as post graduation.
PUC – Pre-University Course – This level of educational qualification is equivalent to twelfth standard or intermediate course. This is also referred to as higher secondary level.

SSLC – Secondary School Leaving Certificate – This level of educational qualification is equivalent to tenth standard or matriculation.

TCH – Teacher’s Certificate Higher grade.

TV – Television.

VCP/VCR – Video Cassette Player/Video Cassette Recorder.