CHAPTER-II

RESEARCH METHODOLOGY

INTRODUCTION:

Research is a careful investigation or inquiry especially through search for new facts in any branch of knowledge. According to Redman and Mary research is a systematized effort to gain new knowledge. According to D.Sleshinger and M.Stemson research has been defined as the manipulation of things, concepts or symbols for the purpose of generalizing to extend, correct or verify knowledge, heather that knowledge aids in construction of theory or in the practice of an art.

Social Science Research is a scientific undertaking which by means of logical and systematized techniques, aims to discover new factors to verify a test old facts, analyze their sequence interrelationship and casual explanation which were derived within an appropriate theoretical frame of reference, develop new scientific tools, concepts and theories which would facilities reliable and valid study of human behavior. According to PV young social research is the systematic method of discovering news facts or verifying old facts, their sequences, inter-relationships, casual explanation and the natural laws which governs them. Prof C.A Mosr defines social research as “systematized investigation to give new knowledge about social phenomena and surveys”. Rummel defined social research as it is devoted to a “study of mankind in his social environment and is concerned with improving his understanding of social orders, groups, institutes and ethics”. Mary Stevenson defined social research as a systematic methods of exploring, analyzing and conceptualizing social life in order to extend, correct or verify knowledge, whether that knowledge aid in the construction of a theory or in the practice of an art.

The present research is a social Science research undertaken by the researcher in Kempanapura village of Chamarajanagara district of Karnataka State.
v RESEARCH METHODS

The two major methods of research are a) Qualitative method and b) Quantitative method. Both the methods are used in the present research.

v RESEARCH TOOLS & TECHNIQUES:

ël Questionnaire

First, a household questionnaire was prepared to determine village profile. Questionnaire is an important tool in research to collect the data. The educated youths, elderly men and educated girls were given the questionnaire. It is a quantitative method of data collection and to some extent helps to collect the qualitative data.

ël Interview Guide

Interview guide is also used by the researcher. Interview schedule is a guide to the researcher to collect the data. It helps to recall the questions to be asked to the interviewee in interviews, especially this tool is helpful in depth interviews. It helps to gather qualitative data. In fact, Interview Guides Often helps when one is entering into a conversation it is with a specific goal in mind, like one may be interested in knowing about herbal medicines or about marriage presentations or about development activities and one has an idea about what kind of information is required. In the course of an open conversation there is tendency for the conversation to drift. So an interview guide is an open ended set of questions that act as reference point for the interviewer to bring the conversation back to certain crucial areas on which information is being sought. It is also like a reminder that one needs to ask something on a particular aspect. However it is advised that one should never impose one’s self on the informant. It is best to let the conversation takes it own course.

The following tools and techniques of qualitative methods of research were used by the researcher. They are:

• Participant Observation
• Interviews
• Textual analysis
• Transcripts of conversations
• Participatory Rural Appraisal (PRA)
• Case Studies

**Participant Observation:**

‘Participant observation’ is one of the important techniques of qualitative methods of research in Anthropology. Observation is defined as purposeful seeing. When an anthropologist looks at things it is with an aim in view, the aim to understand and find an explanation for what ever is happening. Shri M N Srinivas, noted Anthropologist in his book ‘remembered village’ has extensively used this technique to document the social life of Rampura village.

Deliberate and guided observation were also used by attending the festivals performed by the villagers. And attended the meetings both formal and informal meetings formed the basis for research. The informal meetings included gathering by men near the temple and by women at water collection points at a definite time on a routine basis. Their formal meetings included nyaya panchayaths, weekly meetings of self help groups, and monthly meetings of youths.

**Interviews**

Researcher used the casual conversation technique to make the individual informants more relaxed while providing informations.

The researcher also used ‘in-depth interview’ to pursue the process of questioning in particular way and got the respondents to speak at length about a subject. In the process

**Genealogical Method**

Kinship has traditionally been one of the areas on which most ethnographies need to have knowledge. This particular method was devised by W.H.R.Rivers to collect data on kinship but that can also be used to collect a variety of other data, especially those that involve the transformations over generations, as also various kinship related aspects like marriage distance, patterns of marriage, divorce rate, demographic data like numbers of children, death rate, birth rate and so on. It essentially involves the diagrammatic representation of one informant’s family
ties extending over several generations depending upon the memory of the informant. It does not mean lineal representation alone but the tracing of ties bilaterally, the idea being to include as many persons as possible over as many generations as possible. It has the advantage that data concerning many persons are condensed into one genealogy. One may choose to mark some particular variables into the genealogy like age at marriage, or occupation, or education so that we can tell if there has been a change in age at marriage over the generations or what is the educational transformation over three or four generations. Being a pictorial diagram it makes analysis easy as everything is in front. The choice of informant is very important, as older informants with good memory are better than younger informants who may not have good knowledge about the family tree. Some societies have a tradition of maintaining genealogies and in India there is a caste group that maintains genealogies. Such people may have a wealth of data with them.

Group discussions with elderly people who have good memories were held in Kempanapura village to collect the Family Tree of 503 households to know the social and economic relations among the communities and importantly the reach out of development programs to the families.

**Group discussions**

Group discussions with selected village informants were also held to collect village information. These informants included village headman, village headman assistants, village youth clubs, village health volunteers, community development volunteers. Similarly

**Textual Analysis**

The researcher also used the textual analysis. It combines both qualitative and quantitative approach. Reports of various departments were available for reading. Some interested /and important themes were selected for in depth study.

**Transcripts**

Reports available themselves will never speak. The researcher has to make them to speak and transcription technique helps for it. From such reports
discussions were held with the concerned persons/officers and information was analyzed. Example: School drop outs details available in the school. Discussion with the headmaster of the school helped to understand the reasons for drop out and analysis of education environment in the village.

**PRA Techniques**

Participatory rural appraisal (PRA) is an approach used by non-governmental organizations (NGOs) and other agencies involved in international development. The approach aims to incorporate the knowledge and opinions of rural people in the planning and management of development projects and programmes.

The popular rapid appraisal technique viz. Participatory Rural Appraisal (PRA) was used. The goal was to understand the local knowledge of the villagers and to understand the structure and resources of the village. With the help of social mapping, location of communities of the village were marked. Resource mapping helped to understand the natural resources of the village. Time line helped to understand the history of the village, history of the inflow and outflow of the resources. Preference Ranking has helped to understand their preferences on occupations, appropriate technologies and development programs. Wealth Ranking techniques has helped to understand peoples views of rich and poor in contrast with the interventionist views of the same. Transect is a techniques used after all the above mentioned PRA techniques. This involves a walk with the people in the village from east to west and north to south direction, observing minutely and cross check the information which has been pointed out in the maps by the people. This helps to rectify the mistakes if any and additions or deletions if any.

**Case Studies:**

Case studies emphasize detailed contextual analysis of a limited number of events or conditions and their relationships. Researchers have used the case study research method for many years across a variety of disciplines. Social scientists, in particular, have made wide use of this qualitative research method to examine contemporary real-life situations and provide the basis for the application of ideas and extension of methods. Researcher Robert K. Yin defines the case study research method as an empirical inquiry that investigates a contemporary
phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used (Yin, 1984, p. 23).

The present research presents one hundred case studies to strengthen the arguments.

v  PURPOSE OF THE STUDY:

According to the Nanjundappa report on Regional Imbalance, Chamarajanagara block is one of the most underdeveloped blocks of Karnataka State. Kempanapura village is one of the close villages to the Chamarajanagara block which is also administratively the district headquarter. The impact of appropriate technologies and development programs in India and elsewhere are bringing remarkable social changes day by day in the life of the class people in general and rural mass in particular. During 1991-92 the researcher had stayed in the village to implement a development project RSMEDP. After 15 years of gap she decided to revisit the village to understand the development of the village with an assumption that appropriate technologies and development programs must have an impact on the life of the villagers in terms of infrastructure development and human resource development.

v  JUSTIFICATION FOR THE STUDY:

India is a country of villages. 65% of its population live in rural areas. The cultural unity of the Indian people springs largely from the agricultural character of the country. Even today, when industrialization is progressing and large scale migration taking place from rural areas to cities and towns, majority of the Indian people lives in villages and is dependent on land. To understand India, one must, therefore, study its village life.

Rural people are often stereotyped and simple, but they usually know much more about their environment than many well-trained outsiders are they government officials or academic researchers or NGOs or Bankers. Villagers know the soils, the plants, the pests, the seasons, and the problems and risks, which they face. Villagers are born with their own culture and on their fields experience the sequence and conditions of their cultivation as a whole and have or
good insight of the problems. Their adaptations are often skillful, sensitive, subtle and sophisticated. Of late, they are also-getting exposed to newer technologies that are relevant to rural setting. In this backdrop, the justification of study is enumerated as under:

The first point to be decided when a researcher takes up a project is the topic. Having some experience of rural life during her 16 years of work on various projects, the researcher was already aware of the problem of the villagers. In fact she has found during various seminars in which she has participated that although a number development programmes have been implemented by both governmental and non-governmental agencies in Karnataka, there apparently has not been much change in the condition of the villagers. She wanted to find out the reasons for the same.

She felt that the socio-economic condition of the rural people may improve if appropriate technologies are introduced in the village. Hence she wanted to study the role and impact of appropriate technologies and various rural development programmes on an average village in Karnataka. As such she had to find an ‘average’ village in Karnataka. Purposive sampling method was used to select the village. Her experience of working with RSMEDP (Rural Small & Micro Enterprise Development Programme) about 16 years ago came in handy in this regard. The aim of that project was also to ameliorate the poor socio-economic condition of the village. At that time also the project was intended to be undertaken on an ‘average’ village. The researcher selected KP after consulting relevant literatures like census monographs, gazetteers etc. When she checked up these materials afresh it was found that even today KP can be called an average village for that area.

As the researcher was already familiar with the village and people of Kempanapura, having worked there for 17 years ago under the project RSMEDP after consultations with her guide, it was decided to conduct the project on the same village as it will give a number of advantages. These advantages may be enumerated as follows:

1. Having worked in KP for two and half years as a women co ordinator under the project RSMEDP she was familiar to many villagers and had ready access to many of the households.
2. KP was an average village of that area which is comparable to most of the villages around.

3. In 1991-92 the fact that it was an average village prompted the NGO to focus on it. Although RISE (Rural Institute for Social Empowerment) a NGO tried to bring in a series of new technologies and in fact change the ‘life’ of the villagers to some extent it failed to do so for various reasons.

4. The villagers failed to take advantage of the training imparted by the NGO due to the absence of basic infrastructure and mindset. It is this lack of infrastructures and adaptation of mindset that make KP an ‘average’ village.

The researcher being already known to the villagers and having a rapport with them could arrange discussions with selected informants either in a group or individually to collect information. These informants included village headman, his assistants, village youth clubs, village health volunteers as well as community development volunteers and various other officials. Some of the villagers who are presently working in the police department and railways were also interviewed. These discussions with selected informants were used to collect information about the present day condition of the village.

v FORMULATION OF THE RESEARCH QUESTIONS

Formulating research questions means asking new questions in the light of previous questions/hypothesis/theories/methodology or empirical research findings. Research question is a statement or questions that identifies the phenomenon or problem to be investigated or experimented. It is the guiding force for a given study to generate, analyze and present qualitative and or quantitative data in a systematic manner. (Maxwell, 1996). Research study without research questions is like a boat without oars.

The present research tries to find out answers for following questions:

1. What is the nature and degree of impact that appropriate technologies and development programs have on the life of the rural mass in general and rural poor in particular?
2. What are the constraints faced by the rural people to avail, use the appropriate technologies and development programmes or reasons to reject the same?

3. Whether appropriate technologies in its real sense of meaning are operating and are useful to the rural people?

4. What are social and cultural changes that have taken place in the village due to the introduction of appropriate technologies and development programs?

5. (i) What factors which limit or enhance the successful functioning of development programs in community development (ii) What factors affect the community to participate in development programs? How the community’s decision to participate in development programs respond to changes in activities and contextual factors?, (iii) Can development programs increase the community members’ income generating capacity?, (iv) Whether participation in these development programs improves the condition and status of the community members, improves the access to quality health and education (v) What institutional arrangements need to be in place for such development programs to facilitate to improve quality life of rural communities (vi) What policy action must be taken both at micro and macro level to gear up women participation in development programs to gear up rural development? In order to address the research questions, the present study attempts to examine the determinants of functioning of development programs and evaluate the social and economic impact of such programs. More specifically, (i) to identify and study the determinants of functioning of development programs in Indian villages (ii) to examine various household level and contextual factors which determine the community participation in development programs (iii) to study the impact of community participation in development programs on the household income, improves the access to quality health and education and (iv) to suggest appropriate policy measures to enhance community participation in development programs so as to achieve increased rural
household income and sustainable access to and control over quality health and education

AIM OF THE RESEARCH

To understand the impact of appropriate technologies and development programs in India in general and Kemapanapura village in particular.

OBJECTIVES OF THE RESEARCH

1. To present a socio-cultural profile of Kempanapura village. The profile includes the socio-cultural details such as age, marital status, family size, economic status, educational status, health, food and nutrition, and traditional practices.

2. To find out the various appropriate technologies and rural development programmes implemented by the government, non-government organizations and financial institutions.

3. To analyze the constraints faced by the villagers in availing and utilizing the benefits of the appropriate technologies and rural development programmes.

4. To examine the nature and degree of infrastructure development and Human Resource Development and Empowerment taken place as a result of the appropriate technologies and rural development programmes.

5. To find out the role and impact of the appropriate technologies and rural development programmes on socio-cultural life of the villagers and suggest suitable alternative measures for improving the existing programmes and policies for optimum functions and sustainability.

6. To study the process of socio-cultural change taken place in the Kempanapura village due to the impact and role of appropriate technologies and other developmental programmes.

MAIN TESTABLE HYPOTHESES

A tentative proposal made to explain certain observations or facts that requires further investigation to be verified. A hypothesis is a formulation of a question that lends itself to a prediction. This prediction can be verified or
falsified. A question can only be use as scientific hypothesis, if there is an experimental approach or observational study that can be designed to check the outcome of a prediction. **Observational study** is conducted in this research to test the hypothesis.

**The hypotheses for the study constitutes:**

- Functioning of development programs in the village is determined by various physical, socio-economic and institutional factors and varies across type of activities,
- The community participation in development programs is not program specific but is determined by various household specific characteristics and contextual factors (physical, socio-economic and institutional factors),
- The community participation in development programs increases the participant household’s income, improves its condition and status in the society, improves access to and control over quality health and education.

**V RESEARCH DESIGN**

Social research methods may be divided into two broad categories of research designs. They are: Quantitative designs attempt to reduce social phenomena to quantifiable data which can then be statistically analyzed, focusing on the links and attributes across several cases. Qualitative designs emphasize personal experiences, interpretation, and self-knowledge over quantification, are concerned with understanding the meaning of social phenomena, and focus on links and attributes across relatively few cases.

**UNIVERSE OF THE STUDY:**

As the total population of the village was more consisting of only 503 households all the village households were taken as a sample. All the 503 households in the village constituted the universe of the research. The data collected of the universe consisted of information of each individual in the household. These included such variables as age, gender, education, occupation, marital status, contraceptive use, migration, acres of land owned, house renovation time, household assets, household production resources, household animal husbandry activity, household sanitation and environment status, household members participation in interest groups.
Out of 503 households, 100 households were selected for case studies to substantiate the arguments.

**BASE TO SELECT 100 CASE STUDIES OUT OF THE UNIVERSE**

G.R. Madan in his book *Changing Pattern Of Indian Villages* (page No.23) mentions that Population in villages can be classified into three distinct groups according to their socio-economic status. Further I elaborate in the statement that access and interfacing with government schemes.

They are (a) The upper group of agriculturists, and upper status and higher income segments of the population, consisting mainly of the dominant agricultural caste as well as the upper caste and a few people from better economic status drawn from other castes (b) The middle group of less well to do agriculturists and artisans and occupational castes (c) The lower group of lower status and lower income castes (consisting of mainly untouchables and other poor agricultural laborers. This classification was the base to select the 100 respondents for case studies.

**SAMPLE**

The sample survey is one of the most important research tools available to the social scientist. The researcher selects a subset of the population called a sample and then records data on the variables of interest. The information gathered on the sample permits inferences to be drawn about the population with a known degree of confidence. The sample survey stands in contrast with a census, which is based on an enumeration of the entire population. The flexibility, accuracy and modest cost of the sample survey make it an extremely effective method of gathering information. 100 households out of 503 households forms the sample of the study.

**VARIABLES USED IN THE STUDY**

A variable is any entity that can take on different values. Anything that can vary can be considered a variable. For instance, age can be considered a variable because age can take different values for different people or for the same person at different times. Similarly, country can be considered a variable because a person's country can be assigned a value.
Variables aren't always 'quantitative' or numerical. The variable 'gender' consists of two text values: 'male' and 'female'. If it is useful, researcher can assign quantitative values instead of or in place of the text values, but need not have to assign numbers in order for something to be a variable. It's also important to realize that variables aren't only things that a researcher measure in the traditional sense. For instance, in much social research and in program evaluation, treatment or program made up of one or more variables are considered. i.e., the 'cause' can be considered a variable. An educational program can have varying amounts of 'time on task', 'classroom settings', 'student-teacher ratios', and so on. So even the program can be considered a variable, which can be made up of a number of sub-variables.

The present research considers Gender and Caste as the two important variables in the success of appropriate technologies and development programs.

**PILOT STUDY:**

The term 'pilot studies' refers to the pre-testing of a particular research instrument such as a questionnaire or interview schedule. In the present research did the pre testing of the questionnaire with 15 households wad done. This helped to add many questions and delete irrelevant questions. Thus the questionnaire was interviewee friendly. Five case studies were done first which helped to add important questions for the interviewer.

**MAIN STUDY:**

The main study was conducted as per the plan. The plan included:

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<tr>
<th>Activity</th>
<th>Duration</th>
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<tr>
<td>Review of Literatures</td>
<td>3 months</td>
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<td>Field work for data collection</td>
<td>1 month</td>
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<td>study village</td>
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<td>data collection</td>
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<td>Writing of Theses</td>
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<td>Writing of final synopsis</td>
<td>3 month</td>
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<td>Total months</td>
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STATISTICAL ANALYSIS

In statistics, the general level, characteristic, or typical value that is representative of the majority of cases. Among several accepted measures of central tendency employed in data reduction, the most common are the arithmetic mean (simple average), the median, and the mode. Arithmetic mean, the sum of all data divided by the number of observations in the data set. Median, the value that separates the higher half from the lower half of the data set. Mode, the most frequent value in the data set. Measures of central tendency, or "location", attempt to quantify what we mean when we think of as the "typical" or "average" score in a data set. The concept is extremely important and we encounter it frequently in daily life. For example, we often want to know before purchasing a car its average distance per litre of petrol. Or before accepting a job, you might want to know what a typical salary is for people in that position so you will know whether or not you are going to be paid what you are worth. Or, if you are a smoker, you might often think about how many cigarettes you smoke "on average" per day.

CHAPTERISATION

The present research is divided into five chapters. The first chapter provides introduction to the topic ‘appropriate technologies and development programs. Its role, impact and importance at three levels viz, global level, national level and local level or village level. It provides details on the review of literatures and research methodology. The second chapter provides a detailed background and introduction to the village Kempanapura. The third chapter presents the data collected. The fourth chapter analyzes the data so collected. The fifth chapter deals with researcher’s observations, findings, discussions and conclusions. Village maps, photographs and Pie and bar charts are presented wherever necessary. Statistical appendices, bibliography, questionnaire, interview schedule forms the annexure.

DEVELOPMENT KNOWLEDGE

The main object of any research is to add to the knowledge. The research is a process to obtain knowledge. Social research is an organized and scientific effort to acquire further knowledge about the problem in question. Thus social
science helps the researchers to obtain and add to the knowledge of social phenomena.

The present research discovers the importance of having a detailed document on details of households based on genealogical method in the Gram Panchayaths so that it enables for the Government, to reach the poorest of the poor in a systematic manner and achieve equitable social justice through its development programs. To do so it needs amendment in the law itself. To bring in such a law demands strong political will on the part of the politicians. It demands strong conviction on the part of the upper caste, upper class people. Such an amendment also bring true number of eligible families for development programs.

✓ BIBLIOGRAPHY

At the end of the thesis, a bibliography has been added which contains the list of books publication, periodicals, journals, reports, unpublished papers which are used by researcher in the connection with this study in order to facilities any further reference to the matter either by the researcher herself or anybody who goes through the thesis.

✓ A LIST OF THE OFFICES AND INSTITUTIONS VISITED FOR DATA COLLECTION AND DISCUSSION

Government Departments:

- The Department of Land Acquisitions
- The Department of Agriculture
- The Department of Women and Child
- Women Development Corporation cell
- SC Development Corporation (Dr.Ambedkar Development Corporation) Ltd
- Minorities Development Corporation
- The Department of Khadi & Village Industries
- The Department of Animal Husbandry
• The Department of Horticulture
• The Department of Watershed Development
• The Department of Education
• Grama Panchayath, Kempanapura

v NON GOVERNMENT ORGANISATIONS

• RISE (Rural Institute for Social Empowerment), No. 5 DVC Block, Ramkrishna Nagar, Mysore district
• Parishram Seva Samsthe (PSS), Santhemaralli & Chamarajanagara taluks.
• Enrich, Santhemaralli, Chamarajanagara district
• Organisation for Development of People (ODP), Mysore
• Mahila Samakhya, Chamarajanagara district

BANKING INSTITUTIONS:

- State Bank of Mysore, Santhemaralli Branch
- NABARD, Chamarajanagara
- Meghavath Micro Finance Ltd.
- Private Money Lenders

Thus the above techniques were used to conduct specific research activities here viz data collection, analysis and findings and drawing of conclusions.