CHAPTER 3

RESEARCH METHODOLOGY

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3.1 INTRODUCTION

The present study is an attempt to examine the E-Journals collection development issues in special libraries in Kerala. A world-wide historical account of the growth of E-Journals and E-Resources, various issues and challenges faced by the library fraternity in the E-Journals collection development, as well as the state-of-art of the subject are meticulously mapped by means of a near-comprehensive literature survey on published literature.

The learning which was unleashed by the literature survey was substantially used in the design of the questionnaire, with a view to collect pertinent data from the libraries under study.

Data on significant information have been collected from the universe defined for the purpose using standard methods and techniques. The methodology adopted for the study is described below.

3.2 SELECTION OF SAMPLE

The universe of the present study includes the special libraries in Kerala. There are more than one hundred special libraries in Kerala and these libraries can be categorised as libraries coming under the purview of Government of India institutions, those attached to State Government institutions and private institutions. But, only the special libraries attached to the research institutions in Kerala, run by the Government of India (Central Government) and those run by the Government of Kerala (State
Government) were selected for the study. Thirty nine such special libraries are identified for the study. Accordingly, questionnaires were sent to thirty nine special libraries, with a request to revert the questionnaire after furnishing the details. Some of the institutions informed that they are not subscribing to E-Journals and hence not participating in the study. On the basis of the receipt of the filled in questionnaires, 28 libraries (Appendix-I) were selected for the study.

3.3 DATA COLLECTION TOOLS AND METHODS

The study deals with E-Journals collection development issues in special libraries in Kerala. Data have been collected from the persons in charge of the special libraries. In order to ensure sufficient first hand information with respect to the study, a questionnaire has been administered to the persons in charge of representative sample of special libraries in Kerala. In addition to the questionnaire, data have also been collected by means of personal visits, interactions, discussions, e-mail correspondences, observation. Websites have also been consulted to supplement the data collection process towards requisite information for the research. A brief detail of these methods are described subsequently. A great deal of information on the library collections, IT Infrastructure, Networking, Websites and the collection development have been collected through personal/professional e-mails.

The questionnaire has been prepared in line with the objectives of the study. The main purpose of this questionnaire has been to collect the details of the special libraries with respect to their administrative set up, general collection development practices followed, E-Journals collection development procedures and practices, role of
library consortia in E-Journals collection development and key areas of challenges, issues relating to E-Journals collection development (Appendix-II).

This questionnaire consists of five sections. The descriptions of data collected under these sections are detailed below:

**Section A: General Information:** This section is meant for collecting general information regarding the library. The questions asked in this section, aim to get the name and address of the institution, name of the library, year of establishment, research focus, details of library staff, category of users, library timing etc.

**Section B: Library Collection Development:** This section deals with collection development aspects of the library. The current status of the library collection, finance and budget for the last five years, growth rate of print and E-Journals in the library, collection development policy etc. are asked in this section.

**Section C: E-Journal Collection Development:** Under this head, questions for collecting information regarding E-Journals collection development in the library are included. The detailed account of methods of selecting E-Journals, evaluation process followed for the selection of E-Journals, processes of acquisition of E-Journals, acquisition steps followed for E-Journals subscription, methods followed for E-Journals renewal/cancellation in the library are asked.

**Section D: Library Consortium and E-Journals Collection Development:** Questions in the section D are to collect information regarding the role of library consortium in E-Journals Collection Development. Questions are asked regarding membership in different consortium, number of E-Journals accessible through consortium to assess the E-Journals share on account of consortia membership etc.
Section E: Key areas of challenges, Issues and problems in E-Journals collection Development: Questions in the section E are framed to collect data relating to various issues faced by library in the E-Journals collection development. The detailed account of E-Journals subscription models followed by the library, pricing models practiced, ICT Infrastructure including different types of servers/computers available in the library, network environment available in the library, internet connectivity, bandwidth, availability of library website, designing and maintaining the library portal, National Knowledge Network (NKN) connectivity, cloud computing, content management system etc., access methods followed, organisation of E-Journals, methods of maintaining E-Journals usage statistics, E-Journals access management systems, single Sign-on and remote access system for E-Journals, archival systems for E-Journals, budget allocation for E-Journals, staff for management of E-Journals are asked to assess the issues faced by libraries in the collection development of E-Journals. Apart from this, the respondents are asked to suggest better ideas for the management of E-Journals in the library.

A close examination of the available literature, personal visits to select special libraries which form part of the universe selected, visits to several library web sites, discussions with librarians and information professionals enabled the investigator with the research design.

The study focused on systematically assessing the existing collection development practices followed, status of E-Journals collection development in the library, role of library consortium in E-Journals collection Development and the issues faced by libraries in E-Journals collection development, with a view to ascertain the feasibility for efficient and effective collection development of E-Journals in the
libraries selected for study. The study also invited suggestions for the better management of E-Journals in the library, through the questionnaire administered.

3.4 DATA COLLECTION PROCEDURE

Sufficient copies of questionnaires were prepared initially. Questionnaires were sent by post along with a self addressed and self stamped envelope. Reminders were sent to the non respondents by post as well by email. In addition to this, investigator personally visited some of the special libraries for collection of data. Most of the librarians responded very positively towards the study and the experience was encouraging.

3.5 DATA ANALYSIS TECHNIQUES

The Data collected through various sources were evaluated and analysed to find the results. The data were consolidated separately using spreadsheet package. The data were then subjected to further statistical treatment using the statistical package ‘Statistical Package for Social Sciences (SPSS)’. Percentage analysis was used and in appropriate cases Chi-square test was done to find out the significance of association between variables of study. The Compound annual growth rate (CAGR) was calculated to assess the growth of print and E-Journals. The data was interpreted and presented using Tables, Charts and Figures.

The Chi-square test: The Chi-square test is mainly used for testing the association between two attributes. Chi-square is the measure of discrepancy between actual observation and expected value under the hypothesis of no association between attributes. Lower the value of Chi-square means lesser the association. In computation, we find the Chi-squire and corresponding P-value. If P<0.01 then association is highly
significant. If $P$ is between 0.01 and 0.05 the association is significant at 5% level and if $P>0.05$ there is no significant association between the attributes.

The formula for calculating Chi-square is: $X^2 = \Sigma \frac{(f_o - f_e)}{f_e}$

Where: $f_o$= Observed Frequency; $f_e$= Expected Frequency; $\Sigma$= Add together the differences for all cells.

**The Compound annual growth rate (CAGR):** The Compound annual growth rate (CAGR) is a useful measure of growth over multiple time periods. It can be thought of as the growth rate that gets from the initial number of E-Journals and print journals to the ending number of E-Journals and print journals, if assume that the number of E-Journals and print journals has been compounding over the time period. The compound annual growth rate is calculated by taking the $n^{th}$ root of the total percentage growth rate, where $n$ is the number of years in the period being considered.

The formula for CAGR is: $CAGR = (EV/BV)^{1/n} - 1$

Where: $EV$=Ending Value; $BV$= Beginning Value; $n$=Number of period (months, years etc.).

The data analysis led to inferences and interpretations as presented in the subsequent chapters.