Chapter III

RESEARCH METHODOLOGY

The present chapter contains an elaborate description of the methodology adopted by the research scholar for completing the area of investigation. The research proposal consists of the definition, scope, significance of the problem stating its worth to investigate followed by the methodology that will be employed to solve the problem. Therefore, at the very first instance the selection of the proposal should describe the reasons, that the problem is important and worth investigating and this investigation forms the introductory part of the thesis. The review of literature provides the background information and a critique of the previous research done on the topic, pointing out the weakness, conflicts and areas requiring further investigation. This forms the second chapter of the thesis which includes a detailed review of related literature and a discussion on the inductive and deductive reasoning process used in developing the problem and formulating the hypothesis. Further, it also helps in outlining the objectives of the study. The research methodology takes into consideration: the selection of the sample, selection of the instruments essential for investigation, correct way of tabulating the data and a detailed statistical application employed for analysis and discussion of the results obtained will be documented in this chapter.

PROCEDURE

The Procedure has adopted by researcher explained in this chapter and various steps which are as followed for constructing and developing of suitable questionnaire, selection of subjects through random sampling method, its administration to the subjects (schools) aids to responses methods used for collection of data i.e. by post, by hand, personal visit, through information technology, telephonic, e-mail, fax, R.T.I letters etc had been used and statistical techniques and method were adopted for analyzing the collected data as under:
AREA OF THE STUDY

Main objective of the study is to examine the physical education programme and sports facilities between two different sectors of schools. For this purpose students of public and government schools will be randomly selected to serve as subjects.

The present area of investigation was completed under the title of the study “COMPARATIVE STUDY OF SPORTS FACILITIES AND PROGRAMMES BETWEEN PRIVATE & GOVERNMENT SCHOOLS OF KARNATAKA STATE”. For the purpose of investigation, the data was obtained covering the Physical Education department heading the schools in Karnataka state, further delimited to private schools and government schools (delimitation of study). Further, the selection of the Physical education facilities was based on convenient sampling to obtain relevant information through administering the questionnaire.

SAMPLING DESIGN

i) Sample of schools:

As it has already been stated that sample of schools from Karnataka state city schools were selected on the basis of convenient sampling technique because it was difficult (as limitation of the study) to visit all the schools of Karnataka to collect the required information to cater to the requirements of the study.

ii) Sample of Respondents:

The respondents were either the Physical education In charge or Physical education teacher of the school or concerned sports department in charge of the schools (having the official charge of the school). The research scholar had obtained prior appointment with the respondents. However, random sampling approach was
followed. For the purpose of the study as stated earlier, convenient sampling method
was employed since it was extremely difficult to obtain information from all the
schools of Karnataka state (as limitation of the study).

**SELECTION OF SUBJECTS**

The research scholar had sent the questionnaire to all the 292 Private and 287
Government schools of Karnataka state. Initially the names and addresses of all the
schools were obtained from the internet and from department of Education
Government of Karnataka state, Belgaum.

However, 292 Private and 287 Government schools had responded the
questionnaire through E-mailed, Registered post and on Personal visits of scholar.
From received above responses Private and Government schools (Subjects) had
responded correctly all the questions of questionnaire. The selected sample schools
(Subjects) are being managed, Private schools by their own agencies and Government
schools by the state Government, so as these subjects has been finally randomly
selected for this research study.

**Construction of the Questionnaire**

For the construction of the questionnaire the research scholar studied
literatures, magazines, periodicals and completed research work in the area of
physical education and sports.

The selection of the tool was of vital importance for the study, since the aim
was "Survey of Physical education programmes, Sport Infra-structure, Sport
personnel, Financial provisions and Students participation in sports in schools of
Karnataka State. It was decided to use the questionnaire as a tool for obtaining the
necessary data from the sample.
The questionnaire was framed and construction was done with the suggestion of other subject experts along with the supervision and consultations of the supervisor/guide with utmost care and seriousness of the purpose by taking into consideration the maximum coverage of the area of the field concerned and the relevant aspects needed for the study, so as to get maximum worthwhile and meaningful responses from the subjects. The questionnaire framed further the construction and the arrangement of the questions was made in such a logical way/manner so that the sequence and coherent is the response statement would be readily available in an orderly manner, which in turn may serve as a yard-stick for determine problems.

The questionnaire was constructed in such a way that it covers important aspects of the study and the areas which shall be important for betterment of the schools. The important aspect which leads to develop the physical education and sports programmes in the schools of Karnataka state.

The subjects were asked to respond to the questions in 'Yes' or 'No' type, in the blanks ticking the appropriate statements accordingly in the columns provided and answer in short.

The questionnaire contains five sections special question was given to cover all the necessary components in the section of the questionnaire. The questionnaire thus consist of general information about sport personnel, infrastructure-facilities, equipments, budgets, intramural and extramural sport competitions, participation of students, achievements of players, library, sports day etc. so as to gain maximum worthwhile detailed and meaningful information from the sample.

**Development of the Questionnaire**

The following procedure and step were followed by the researcher for the development of the questionnaire.
(a) Initial Writing

After a thorough review of the related literature and the research work already done in the area of Physical Education and Sport, researcher had developed an insight into the various components that are essential for physical education programme, Infrastructure-facilities, Sports personnel, Financial Provisions and Student participation in sport in schools. Initially several questions were framed focusing the purpose of this study. These items were shown to the guide and the subject expert for their valuable suggestions for incorporating the necessary recommendations. Finally the first draft of the questionnaire was developed.

(b) Trial Runs

After the framing and development of the questionnaire satisfactorily including all necessary valuable suggestions it was arranged them in logical and sequential order, the next and further step was the trial run. The purpose of trial run was to find out whether the questions were clear and adequate to obtain the desired information. During the trial run, the initial questionnaire was given to guide/supervisor and experts in the field of physical education. They were requested to answer the questions and critically evaluate the items of the questionnaire within the framework of the research study.

(c) Re-writing

On the basis of expert’s suggestions and guide's recommendation the necessary changes were made in questions with the help of the language expert, the questions were reframed in simple language. The questionnaire was finally approved by the guide.

Administration of the Questionnaire
The copies of the questionnaire with governing letter and self addressed stamped envelope were posted and e-mail to the concerned Principals/Sports Officer of all the Government and Private schools of Karnataka State, with the request that they produce correct and accurate responses and return the completely answered questionnaire to the researcher as early as possible. In addition to this the researcher were make personal visits and had interacted with the various Principals and Sports officers of the schools.

(a) Personal Visits

Although it was not only difficult but also impossible for the researcher to pay personal visit to every schools in Karnataka state nevertheless the researcher tried his best and visited many schools. In his personal visit the researcher studied the Physical education programme, infrastructure-facilities, sports personnel, financial provisions available and student’s participation in sport in schools.

(b) Interviews

The researcher interviewed available Sports Officer and also experts in the schools and got valuable information. The Sports officer being executive heads and policy makers in their respective schools answered many question and explain certain difficulties which might not be answered by way of questionnaire.

All the data collected through questionnaire and personal visit was recorded.

Aids to Response

The following aids were used to obtain the responses from the subject:

(1) The researcher took the help of sports officer for follows-up work.

(2) An assurance was given to the subjects that the received information will be kept confidential and use exclusively for the present research study only.
Many respondents were also requested to telephonically by SMS and by e-mail the researcher to fill the questionnaire and return it at the earliest. 

Follow up was made by mailing letters to some subjects for returning the questionnaire.

Lastly, Scholar visited personally and collected information in questionnaire.

**Methods used for collection of data**

(1) A self addressed stamped envelope was enclose along with the questionnaire and sent to the Principals/Sports officer working in the various schools along with the letter enclosed which highlighted the importance of the study for the betterment of the school’s sports programmes so that if he/she conduct or modify the physical education and sports programme, then the programme will be improve efficiently and effectively.

(2) Those Principals/Sports officer who did not send the response were mailed again a copy of questionnaire along with the request.

(3) An assurance was given to keep all the received information confidential.

(4) All the respondents were assured of a copy of summary of the dissertation results will be send.

(5) Surveyed through the telephonic, SMS and e-mail to get the information regarding the entitled topic of the study.

(6) If the college Principals/Sports officer did not send the response then the researcher went personally to nearby schools to get the information.

(7) In this way the research scholar collected the data.

To make the data collection more reliable and useful, the researcher personally visit the various schools as far as possible to have personal discussion pertaining to the schools physical education programme, sports-infrastructure, sports personnel, financial provisions and students participation in sport.

**Statistical Procedure of Data**

The responses obtained from different academic Private and Government schools for the survey study method regarding Physical Education Programmes, Sport
Infrastructure, Sports personnel, Financial Provision and Students participation in sports in schools of Karnataka state were converted into simple percentage for the purpose of analysis and interpretation of the findings which were further illustrated by means of simple Bar Diagrams. The information procured through the opinions of the subjects was also analyzed qualitatively and is presented in the next chapter.

**Chi-Square Test Requirements**

1. Quantitative data.
2. One or more categories.
3. Independent observations.
4. Adequate sample size.
5. Simple random sample.
6. Data in frequency form.
7. All observations must be used.

The formula for chi-square is

\[ \chi^2 = \sum \frac{(O - E)^2}{E} \]

- \( O = \) the frequencies observed
- \( E = \) the frequencies expected
- \( \sum = \) the 'sum of'