Chapter III

METHODOLOGY
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In this chapter, the selection of subjects, selection of variables, tools used, administration of the questionnaire, the research design and the statistical procedure used have been explained.

SELECTION OF SUBJECTS

This study was intended to make a pragmatic approach of physical education and sports programmes on the achievements of school students in the Union Territory of Pondicherry. To achieve the purpose of this study, the investigator randomly selected twenty schools from Pondicherry region, ten schools from Karaikal region, five schools from Mahe region and five schools from Yanam region from different managements as mentioned in detail below:

Table 3.1

Number of Schools Selected for the Study among the Four Regions in the Union Territory of Pondicherry

<table>
<thead>
<tr>
<th>S.No</th>
<th>Regions</th>
<th>Categories of Schools</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Government</td>
<td>Private</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aided</td>
</tr>
<tr>
<td>1</td>
<td>Pondicherry</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Karaikal</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Mahe</td>
<td>3</td>
<td>--</td>
</tr>
<tr>
<td>4</td>
<td>Yanam</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>20</td>
<td>10</td>
</tr>
</tbody>
</table>
DESIGN OF THE STUDY

To achieve the purpose of the study, the investigator in consultation with experts and the guide prepared a questionnaire eliciting data pertaining to physical education and sports in their respective schools. Survey type of research was adopted to achieve the purpose of this study.

The survey was conducted among 40 schools selected from four different regions of Pondicherry Union Territory.

QUESTIONNAIRE METHOD

The investigator has used the questionnaire which was specifically developed for collection of data relating to conduct the physical education and sports programmes, facilities imported in the school to conduct the physical education and sports programmes and the achievements of the school students in different levels of tournaments.

DEVELOPMENT OF QUESTIONNAIRE

The methodology adopted in the development of questionnaire is explained in the pre-pilot study and pilot study.

The logical starting point for developing a questionnaire is to ask what your broad aims are: what is it you are trying to find out? And, stemming from this; what are your specific research question? Research papers and reports are typically written up with these aims and questions at the beginning; the teasing out of the issues and the specifications of the context the research is to be reported.

The following chart explains the various stages in the construction of questionnaire.
Figure 3.1: Flow Chart showing the stages in the construction of Questionnaire
PRE-PILOT STUDY

In this phase, the Preliminary work in connection with the development of the questionnaire is described. The stages in the preliminary work are identification of statements, selection of statement and selection of most appropriate statements. They are as follows:

Identification of Statements

In general, the tool to be used in collection of data is a major determinant function of the quality of the study. Hence, in order to ensure the quality of the tools, great care was taken in the collection of statements that are helpful in assessing the physical education and sports programme of the schools. To identify the statements, the investigator has used the sources of personally acquainted physical education teachers on different phases of physical education and sports programmes in their schools.

Selection of Statements

In the selection of statements the process of physical education and sports programmes in the schools were taken into account. From this analysis, the identified statements that are highly relevant were selected for scrutiny.

Selection of most appropriate Statements

In this stage, the selected statements were critically analysed with the experts on the factors that contributed to the quality of the questionnaire. Based on the experts’ remarks and suggestions, the short comings such as irrelevance and inappropriate statements were deleted.
Construction of Responses

To collect necessary data, the responses sought are both Yes / No responses as well as responses required data based on the school records. These multiple levels of responses enabled the investigator to collect relevant data for the purpose of this study.

PILOT STUDY AND EXTRACTION OF FINAL STATEMENTS

To facilitate extraction of final statements, a pilot study was conducted in order to select samples towards the questionnaire and to ascertain the right means and methods for the collection of data on physical education and sports programme and achievements of the schools. In the questionnaire, to maximize the reliability of the data concerned, both positive and negative statements were included.

The investigator in consultation with the guide pooled a number of questions asked from the schools. The questionnaire consists of three parts. Part I deals with the instructions to help to fill up the questionnaire. Part II deals with the general information of the school, type of management, students’ strength and particulars of staff. Part III consists of 20 questions, which has sub questions to seek specific information. The questions have been developed after editing and deleting same meanings, ambiguous and irrelevant statements.

The questionnaire mainly covers the following four aspects: The following salient points are proposed to be discussed to make the pragmatic approach to physical education and sports on the achievements of school students of Union Territory of Pondicherry.

a. Staff appointed for Physical Education and Sports

b. Time Allotted for Physical Education and Sports

c. Provision of play ground and sports facilities
d. Funds provided for the physical education and sports

e. Achievements in terms of Sports Participation of the School at different levels of competitions.

The following salient points, as explained under scoring the questionnaire, are proposed to be collected under the above five heads to make a pragmatic approach of physical education and sports programmes on the achievements of school students in the Union Territory of Pondicherry.

PILOT STUDY

The investigator after the careful preparation of the questionnaire, administered the questionnaire to five selected schools and based on the feedback received, updated a final questionnaire for the administration. Internal consistency correlation was used to establish reliability of the questionnaire.

SCORING THE QUESTIONNAIRE

The main aim was to make a pragmatic approach of physical education and sports programmes on the achievements of school students in the Union Territory of Pondicherry.

The questionnaire formed in the Part III by the investigator for this study consisted of 20 questions, which has sub questions to seek specific information. Each question had yes/ no options as well as multiple responses based on the records maintained by the school. The questions were aimed to elicit the following five points. The questions and the scoring for the responses are detailed below:

1. Staff Appointed for Physical Education and Sports

Staff appointed for physical education and sports programmes of the school were elicited through question number 7, under five different categories, namely, the appointment of the Physical Director, Physical Education Teacher,
Coaches, Markers (Grounds men) and the Part time staff. Scores were awarded to the school one point for each number of staff appointed.

2. **Time Allotted for Physical Education and Sports**

   Time allotted for physical education and sports was elicited through questions Nos. 8 & 9 (a) – details of hours allotted for each class during class hours; No. 22 – Inter-class sports competition hours; No. 23 – Coaching Classes other than regular class hours; The total number of hours per week would be collected and one point was awarded for a period (40 mts). For instance, if 2 hours (120 mts) was allotted for physical education and sports by a school in a week, the school would be awarded 3 points.

3. **Provision of Play Ground and Sports Facilities**

   Play ground facilities for physical education and sports programme of the schools were elicited through Question No. 27 – subdivided into five with details of ground facilities and equipments. One point was awarded for each play ground and equipment facilities available in the school.

4. **Funds provided for Physical Education and Sports**

   Funds provided for physical education and sports programme of the school was considered from three sources, namely, government grants / public donations, management contribution and students contribution (by way of games fee, annual sports day fees etc). One point was given to each Rs.1000/- contributed from all the sources towards physical education and sports programme of the school.

5. **Achievements in terms of Sports Participation of the School at different levels of competitions**

   The pragmatic approach of physical education and sports on achievements of the school students in the Union Territory of Pondicherry was elicited from the selected schools through questions Nos. 22 to 26 of the questionnaire analysis.
Scoring of the school was done based on the total number of participants from the school in each year for interschool level competitions. Credit was given to the state level participation with two points for each participation. And also credit was given to national level participation with four points for each participation.

**DETERMINATION OF PHYSICAL EDUCATION AND SPORTS INPUTS INDEX (PEII)**

The investigator in consultation with the Guide followed a standard norms to score the inputs, namely, the physical education teachers appointment, the time allotted, the time allotted for coaching, provision of physical fitness training, provision of play ground facilities for major games, teaching of minor games, provision of track and field facilities for athletic competitions, provision of sports equipments for major games, provision for separate place for indoor games, provision of store room facilities, maintenance of record for physical fitness of the school students, participations in competitions, physical education syllabus followed, lesson plan for physical education programme, amount of games fee collected and expended in a year etc. Thus, the inputs in each school for physical education and sports programme were scored and an index number of physical education and sports programme was determined for each school under study. This index is considered as Physical Education and Sports Inputs Index. The detailed scoring followed by the investigator is given in Annexure II.

**COLLECTION OF PRIMARY DATA**

The investigator collected primary data from the schools by meeting the head of the institution and the physical education director / teacher in person with prior permission. The purpose of the study was clearly explained and the necessary instructions regarding the method of answering the questions in the questionnaire were given. It was assured to the subjects that their response could be kept confidential and would in no way influence the school performance. The filled in questionnaire from the respondents were collected after checking it all in terms and using the scoring key.
COLLECTION OF SECONDARY DATA

Apart from primary data collected from the selected schools, secondary data were obtained from

(1) The Deputy Director (Sports and Youth Services), Directorate of School Education, Puducherry, and

(2) The Officer on Special Duty (Statistics), Directorate of School Education, Puducherry.

Data related to the following were collected:

(i) The actual number of students enrolled in schools in the state, region wise, sex wise, nativity wise as well as management wise.

(ii) The actual number of teaching and non teaching staff employed in the state.

(iii) The actual number of physical education teachers and coaches appointed in the state.

(iv) The grants released to the schools for the promotion of sports and games in the state.

(v) The number of students participated at zonal level, state level and national level sports meets in different games and athletic events of the Union Territory of Pondicherry was used for analytical purposes.
STATISTICAL TOOLS USED FOR ANALYSIS OF DATA

The primary and the secondary data obtained to make the pragmatic approach of physical education and sports programmes on the achievements of school students in the Union Territory of Pondicherry would be presented through simple statistical tool ‘Percentage’ for clear understanding.

The relationship between the inputs, namely, staff, time, ground, equipment and facilities, funds and the achievements determined through sports participation would be found through Pearson’s Coefficient of Correlation.

The comparison among different regions, namely, Pondicherry, Karaikal, Yanam and Mahe would be compared and the statistical significance of differences would be determined through ANOVA. Wherever significant differences were noted, post hoc analysis would be made through Scheffe’s Confidence Interval test to compare the paired means of the groups. Statistical Package for the Social Sciences (SPSS) was used to analyze the data. The level of significance was fixed as 0.05 levels.