CHAPTER III: RESEARCH METHODOLOGY

3.1 INTRODUCTION

Research is sensible and proficient journey for novel and important evidence on a precise point. It is examination of finding responses for exploratory and social issues through objective and proficient dismemberment. It is a mission for realizing, that is, a revelation of covered truths.

The prime goal of any exploration can be shortened as to

(1) Discover new truths

(2) Verify and test crucial assurances

(3) Analyze an event or strategy or sensation to perceive circumstances and finished results Relationship

(4) Develop new exploratory gadgets, thoughts and theories to comprehend and fathom Scientific and nonscientific issues
(5) Find answers for intelligent, nonscientific and social issues and
(6) Overcome or deal with the issues happening in our common life

3.2. RESEARCH METHODS AND RESEARCH METHODOLOGY

Research procedure is distinctive techniques, plans, figurings, et cetera used as an issue of examination. All the schedules used by a researcher in the midst of an examination research is named as exploration strategies. They are essentially masterminded, investigative and regard impartial. They fuse speculative approach, trial studies, numerical arrangements, true techniques, et cetera. Research frameworks help us assemble cases, data and find a response for an issue. Particularly, investigative examination procedures call for illuminations concentrated around assembled facts, estimations and recognitions and not on intuition alone. They recognize simply those illuminations which can be checked by tests.
3.3. SUBJECT OF PRESENT RESEARCH WORK:

In this chapter the methodology or the procedure to be followed, construction of questionnaire, administration of questionnaire and statistical technique to be used are presented.

Schools and Colleges (Government and Private) have been randomly selected from fifteen districts of Awadh region. This includes equal no. of government and private school and colleges, Minimum 2 schools and 2 colleges was selected from each districts for the present study.

“A STUDY OF SPORTS INFRASTRUCTURE AND FACILITIES IN SCHOOLS AND COLLEGES OF AWADH”
3.4. VARIABLES OF THE STUDY

For the present study the researcher has taken following variables into account, as observed from the specific objectives and corresponding null hypotheses mentioned above.

These variables are furnished below:

1. Various facilities like Athletic Tracks, Badminton and Kabaddi Court, Kho- Kho field, etc.
2. Store Room for keeping sports equipments
3. Activity Related to Physical Education
3.5. UNIVERSE OF THE STUDY:

The universe of the study consists of Schools and Colleges (Government and Private) of Avadh Region, Uttar Pradesh includes equal no. of government and private school and colleges.
3.6. RESEARCH DESIGN

This study has been done to identify and differentiate requirement of sports infrastructure and facilities for school and colleges Government and Private Schools and Colleges of Awadh Region, Utter Pradesh State, India which may.
3.7. SELECTION OF SAMPLE

The sample have been selected from Sixty schools and Colleges (Government and Private) on the basis random selection from fifteen districts of Awadh region which includes equal no. of government and private school and colleges, Minimum 2 schools and 2 colleges was selected from each districts for the present study.
3.8. SAMPLING DESIGN:

The specialist has connected multistage inspecting and advantageous testing system which is done in different stages. Here, the qualified physical education faculties are considered as the essential unit each of which further made out of various optional units as 60 nos. Government and Private Schools and Colleges of Avadh Region, Utter Pradesh State, India. They are further devided onto equal no. of government and private school and colleges out of 15 district. Minimum 2 schools and 2 colleges was selected from each districts for the present study.
3.9. PROCEDURE FOR DATA COLLECTION

Before preparing the questionnaire the research scholar was go through the literature related to the present study and followed all the necessary steps to construct the questionnaire. Help was also taken from central library of different institutions where related literature for questionnaire may have available. The questionnaire was prepared keeping in view the various aspects of physical education facilities. The questionnaire was also being arranged in a logical order where each statement was being recorded clearly to enable institutions to understand and answer those statements without difficulty. Great care was being taken to frame each statement in précised manner without ambiguity.

In depth study was taken to list down the requirement of sports infrastructure and facilities for school and colleges before finalizing the questionnaire for present study

3.9.1. Construction of the Questionnaire

The questionnaire was framed and constructed after the consultation with qualified and experienced faculty of physical education. Ut most care and seriousness was employed in the construction of questionnaire. Taking into consideration the maximum coverage of
the area that was surveyed, great attention was paid to all relevant aspects of the study, so as to get maximum worthwhile and meaningful responses from the subjects.

Further the construction and the arrangement of the questions were being made in logical way so that sequence in the response statements would be readily available in an orderly manner. Attempts was also made to keep the questions simple, clear and relevant leaving no room for ambiguity or vagueness.

The following steps was considered and followed in the construction of questionnaire.

3.9.1.1. Initial Writing

In the first attempt various questions, which required either ‘Yes’ or ‘No’ responses were formulated. Afterwards these questions were changed as per the guidelines and experts opinion from time to time. All the selected questions which recommended by the experts was placed in the questionnaire.
3.9.1.2. Trial Run

After formulation of the questionnaire to the satisfaction of the investigator, with the inclusion of all the essential items in an organized manner, the questionnaire was sent for the trial run. The purpose of trial run was to discover whether the meaning of all statement in the questionnaire was clear and well understood by the respondents. This was help to assess if the questions were adequate to obtain the desired information. During the trial run the questionnaire was given to experts of physical education. They were requested to go through the questions or critically evaluate the items of the questionnaire and to give their suggestions if required.

3.9.1.3. Rewriting

On the basis of the evaluation of the responses and the suggestions, necessary vicissitudes had been completed in questionnaire and lastly separate questionnaire had been formulated for schools and colleges after again obtaining the approval of the experts.
3.9.2. Administration of the Questionnaire and Collection of Data

The copies of the questionnaire with covering letter and self addressed enveloped were mailed to Heads of institution/physical education teachers of selected 34 schools and 34 colleges of Awadh region (Govt. and private), of Uttar Pradesh. The investigator himself was tried to visit some places of Awadh personally for administration and collection of questionnaire. Request was forwarded to the selected colleges and schools of Awadh for providing the desired information for successful completion of the study. To motivate the respondent, scholar was assure all respondents to supply a copy of the summary of the findings after the completion of the study.
3.10. Data Analysis:

The information gathered were appropriately altered, arranged, and dissected utilizing all kind of significant measurable procedures and utilizing the most proper parametric and non-parametric test. The information were displayed through straightforward order and with the assistance of rate, normal, relationship and affiliation, the information were examined and the theory were tried at 5 percent level of essentialness by utilizing proper test. The typical method utilized by the specialist is perception, poll and meeting, examination of records, detailed analysis, and so forth. Techniques are more general than systems. Routines & Techniques are utilized as a part of performing exploration operations, i.e.,

- Collection of information
- Statistical preparing & dissection (tests)
- Evaluation of precision of the results got

The gathered information was broke down by utilizing the accompanying measurable apparatuses and strategies.
3.10.1. Frequency and Percentage Analysis:

Frequency and Percentage Analysis were utilized to decipher the demographic attributes, level of stress among the instructors and the adapting techniques received by them.

3.10.2. Chi-square test

A chi-squared test, additionally alluded to as $\chi^2$ test, is any measurable speculation test in which the testing dissemination of the test detail is a chi-squared conveyance when the invalid theory is genuine. Likewise considered a chi-squared test is a test in which this is asymptotically genuine, implying that the inspecting dissemination (if the invalid theory is genuine) can be made to rough a chi-squared appropriation as nearly as coveted by making the example estimate substantial enough. The chi-square test is utilized to figure out if there is a huge distinction between the normal frequencies and the watched frequencies in one or more classes. At the point when to Use Chi-Square Test for Independence

The test strategy portrayed in this lesson is proper when the accompanying conditions are met:
The examining strategy is straightforward irregular testing. Each populace is no less than 10 times as substantial as its separate specimen. The variables under study are every downright.

If test information are shown in a possibility table, the normal recurrence mean each one cell of the table is no less than 5.

This methodology comprises of four steps:

(1) State the Hypotheses,

(2) Define Analysis of Plan,

(3) Investigate test information, and

(4) Translate results.

1. State the Hypotheses

Assume that Variable A has r levels, and Variable B has c levels. The invalid theory expresses that knowing the level of Variable A does not help you foresee the level of Variable B. That is, the variables are autonomous.
H₀: Variable A and Variable B are free.
Hₐ: Variable A and Variable B are not free.

The option theory is that knowing the level of Variable A can help you anticipate the level of Variable B.

Note: Support for the option theory recommends that the variables are connected; however the relationship is not so much causal, as in one variable "causes" the other.

2. Define an Analysis Plan

The investigation arrangement portrays how to utilize test information to acknowledge or reject the invalid theory. The arrangement ought to define the accompanying components.

✓ Significance level. Frequently, analysts pick hugeness levels equivalent to 0.01, 0.05, or 0.10; yet any worth somewhere around 0 and 1 can be utilized.
✓ Test system. Utilize the chi-square test for freedom to figure out if there is a noteworthy relationship between two clear cut variables.

3. Dissect Sample Data

Utilizing specimen information, find the degrees of flexibility, expected frequencies, test detail, and the P-worth connected with the test fact. The methodology depicted in this segment is delineated in the specimen issue toward the end of this lesson.

Degrees of opportunity. The degrees of opportunity (DF) is equivalent to:

$$DF = (r - 1) \times (c - 1)$$

Where, r is the quantity of levels for one categorical variable, an