CHAPTER 3

RESEARCH METHODOLOGY

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3.0   Introduction

Methodology comprises of the various stages, steps and processes followed while doing a research study. In simpler words methodology can be termed as system of methods which are used while carrying out a research study. The term method has been derived from the Greek term 'methododos' which means 'pursuit of knowledge'. The term "method" means a procedure or a way of doing something especially according to a regular plan or goal. So, the success of any research study mainly depends upon the kind of methodology and procedure used in a step wise sequence to achieve the desired result. Research may be defined as the application of scientific method on the study of the problem. The terms, Research and Scientific methods are sometimes used interchangeably.

The research methodology includes research design or a plan of action which is followed with regards to the nature of population, selection of size of the sample, method of sampling technique, number of individuals who declined to participate, why, where, when and what type of data were collected, the characteristics of the interviewers and observers etc. Thus, it gives a detailed description of procedure or manner that is followed in the study.

Research design provides the investigator, blue print of research as well as limits the boundaries of research project or the problem under investigation.

3.1   Research Methods

Educational Research means a systematic attempt to gain a better understanding of the educational procedure, generally with a view to improving its efficiency. It is an application of scientific method to the study of educational problem.

For investigating any research problem or study, the researcher uses certain methods for conducting a study. Descriptive approach and survey method has been adopted for the present study. It is mixed because it aims to measure the academic achievement of

CWSN with respect to teachers' attitude and availability of assistive technology for them to draw a valid conclusion with intent of improving them.

3.2 Population

A population refers to any collection of specified groups of human beings or of nonhuman entities such as objects, educational institutions, time units, and geographical areas, etc drawn by individuals.

Best and Khan (1992) described that a Population is any group of individuals who have one or more characteristics in common that are of interest to the researcher. The population may be all the individuals of a particular type or a more restricted part of that group.

The population of the present study comprises of all the CWSN students, both boys and girls studying in class **X** in secondary schools under Pallahara Block of Angul district, Odisha. There are 32 secondary schools in total under Pallahara block.

3.3 Sample and Sampling Technique

The miniature representation of larger whole is called sample. **Webster (1895)** stated that sample is a finite part of a statistical population, whose properties are studied to gain information about the whole.

It is a systematic way of taking sample or samples from a population. In the process of sampling, population is divided into number of parts which are generally called sampling units.

3.3.1 Sample Size

The investigator selected 14 secondary schools, 44 CWSN secondary school students and 14 normal school teachers in care of the CWSN students.

3.3.2 Sampling Technique

For this study, the investigator identified secondary schools enrolled with CWSN students under Pallahara Block of Angul district of Odisha.

3.4 Sources of Data

Primary data has been collected from the following sources-

- Block Education Office (BEO), Pallahara, Angul, Odisha.

3.5 Tools Used for Data Collection

The following tools have been adopted as per the need and convenience for the present study.

Table No. 3.1

Tools Used for Data Collection

SL. No	Variables To Be Measured	Tools Used	Author
01	Availability of Assistive Technologies in schools	Checklist	Developed by the investigator.
02	Teachers' attitude	Opinionnaire	Developed by the investigator.
03	Academic Achievement	Data sheet	Marks register of the respective schools.

3.5.1 Checklist

To check the availability of assistive technology in schools, the investigator prepared a checklist of assistive technological devices. The checklist consisted of 16 assistive technology including Wheel chair, walker, screen reader (for partially visual impaired), mobility aid, assistive cane, braille, refreshable braille display, optacon, pencil grip, page turner, high lighter, assistive listening device, talking watch, talking calculator, text to speech reader, screen/video magnifier.

3.5.2 Teachers' Opinionnaire

The opinionnaire consists of 14 questions which were further rectified and verified by the supervisor. The final form of scale was constituted of 14 statements, which includes both positive and negative statements. There are 11 positive statements and 3 negative statements. The value to the statements scaled by 5-point rating scale from strongly agree to strongly disagree.

Table No. 3.2

Scoring for Teachers' Opinionnaire

Items	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Positive	5	4	3	2	1
Negative	1	2	3	4	5

Certain levels have been classified by the investigator to categorise the attitude of teachers' as positive attitude, neutral attitude and negative attitude towards the education of CWSN students. As there are total 14 statements in the opinionnaire, highest mark can be scored by a teacher is 70 as each right answer carries 5 marks and lowest score will be 14 as the lowest mark for each question is 1.

Table No. 3.3

Levels of Teachers' Opinion

SI No	Score of teachers' opinion	Range
01	Positive	52 – 70
02	Neutral	33 – 51
03	Negative	14 – 32

3.5.3 Academic Achievement

The investigator classified the academic achievement of secondary CWSN students under Pallahara block into three levels namely high, average and low academic performance.

Table No. 3.4

Shows the Level of Academic Achievement by Cwsn Students

SI No	Level of Academic Achievement	Range	Percentage
1	High	91-110	Above 50%
2	Average	71-90	40-50%

3.6   Data Collection Procedure

The investigator sought permission from the BEO officer to identify the Secondary schools in Pallahara block with CWSN students enrolled. The investigator selected the required number of secondary schools and was permitted to collect data of CWSN students' academic achievement from the school register. The tool, opinionnaire was developed by the investigator and further verified by the supervisor for assessing the teachers' attitude towards the education of CWSN students in their respective schools. The investigator developed the teachers' opinionnaire on google form and collected the responses of the teachers in care of CWSNs in their respective schools. Further, the investigator prepared a checklist on the basis of norms of Indian govt. basic availability of assistive technology for CWSN students and checked the availability of basic assistive technology in the following schools.

3.7   Data Analysis Technique

The investigator used simple statistical technique for this study.