
Chapter-III
Research Design

CHAPTER-3

RESEARCH DESIGN

3.1 Introduction

A thorough description of how an inquiry will be conducted. How data will be gathered, what instruments will be utilised, how the equipment will be used, and how the data will be analysed are all part of a typical study plan.

“A research design is the determination and statement of the general research approach or strategy selected for the given project,” according to *Luck & Rubin*. It occupies a central position in the planning process. If the design adheres to the research goals, the client's expectations will be satisfied."

“Research in the plan, structure, and technique of investigation devised to gain answers to research questions and to control variance,” according to *Kerlinger*.

“A research design is the specification of techniques and procedures for obtaining the information needed,” according to *Green and Tull*. The main operational pattern or structure of the project outlines what information is to be gathered from which source and how.

The following are the steps in planning the research design:

- Establishing the scope of the project's work.
- Calculating the expenditures involved.
- Establishing a timetable.
- Confirming the results.

In the light of literature, a statement of the problem has been evolved in the previous chapter. This chapter presents a detailed description of plan and procedure used by the researcher for drawing sample, tool development and gathering of data. A research project's design and process are critical components. Without appropriate thought and planning, research cannot be carried out properly. In other words for research to be

done properly there must be planning before. This advanced planning helps the researcher to proceed directly without confusion. According to *Wiersma (1991)* research is a sequence of activities with the possibility of some overlap and fluctuations among the activities.

In this chapter the plan and procedure for conducting the study is being presented in the following sequence:

- Research design
- Population
- Sample
- Tools used in the Study
- Data collection
- Statistical Techniques used

3.2 Research Design

The relevance of research design is that it creates an appropriate framework within which the research work/activity will take place. The research design serves as a plan for how the entire project will be carried out. A research design minimizes time and money, helps in advance learning, helps in voiding of appropriate tools and eliminates bias and marginal errors.

The present examination lies in the domain of descriptive research and nature of the study is qualitative analysis. It will be used to investigate teacher's point of view and different experiences related to the different factors influencing learning based on social factors, psychological factors, school environment and home environment of students with intellectual disability. It will also explore the contribution of inclusive setup schools in the process of enhancing learning of students with intellectual disabilities in New Delhi. The present study is a descriptive study in nature with qualitative methods employed in data collection and analysis.

3.3 Population

A population may be defined as a large collection of people, institutions, items, and other things that have similar features and are of interest to a researcher. A sample is a subset of the population that has been chosen for observation and study. One can make assumptions about the population by looking at the features of the sample. The population for the present study comprised School Heads and Special Education Teachers of government inclusive school in New Delhi.

3.4 Sample & Sampling

A sample is a small representative portion of a population. It is drawn from the population to produce adequate precision and accuracy in results. The population was explored by multistage phase and finally the sample for this study was taken through convenient sampling technique. The sample size for the study was proposed to be 30 Special Education Teachers and 30 School Heads from 30 schools, teaching intellectually disabled students at secondary schools level in an Inclusive setup. The sample for the study was 60 participants (Two participants from each school: $2 * 30 = 60$,

i) School Head and,

ii) Special Education Teacher, who is actively used to teach intellectually disabled students) those were actively involved in teaching-learning of intellectually disabled students in their schools before school closure due to COVID – 19 pandemic.

Note: Due to some personal reasons four participants were unable to give their valuable time for the interview, so only 56 participants' data have been taken for the analysis.

The sample drawn for the present study is illustrated in Figure 3.1

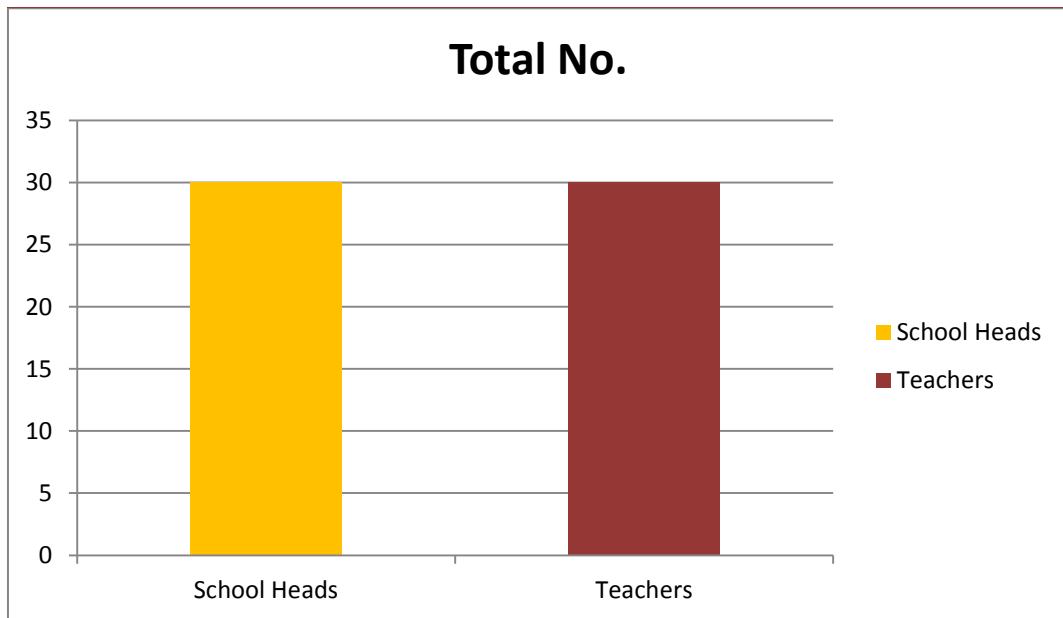


Figure 3.1: Distribution of the Sample for the Study

3.5 Selection of Schools

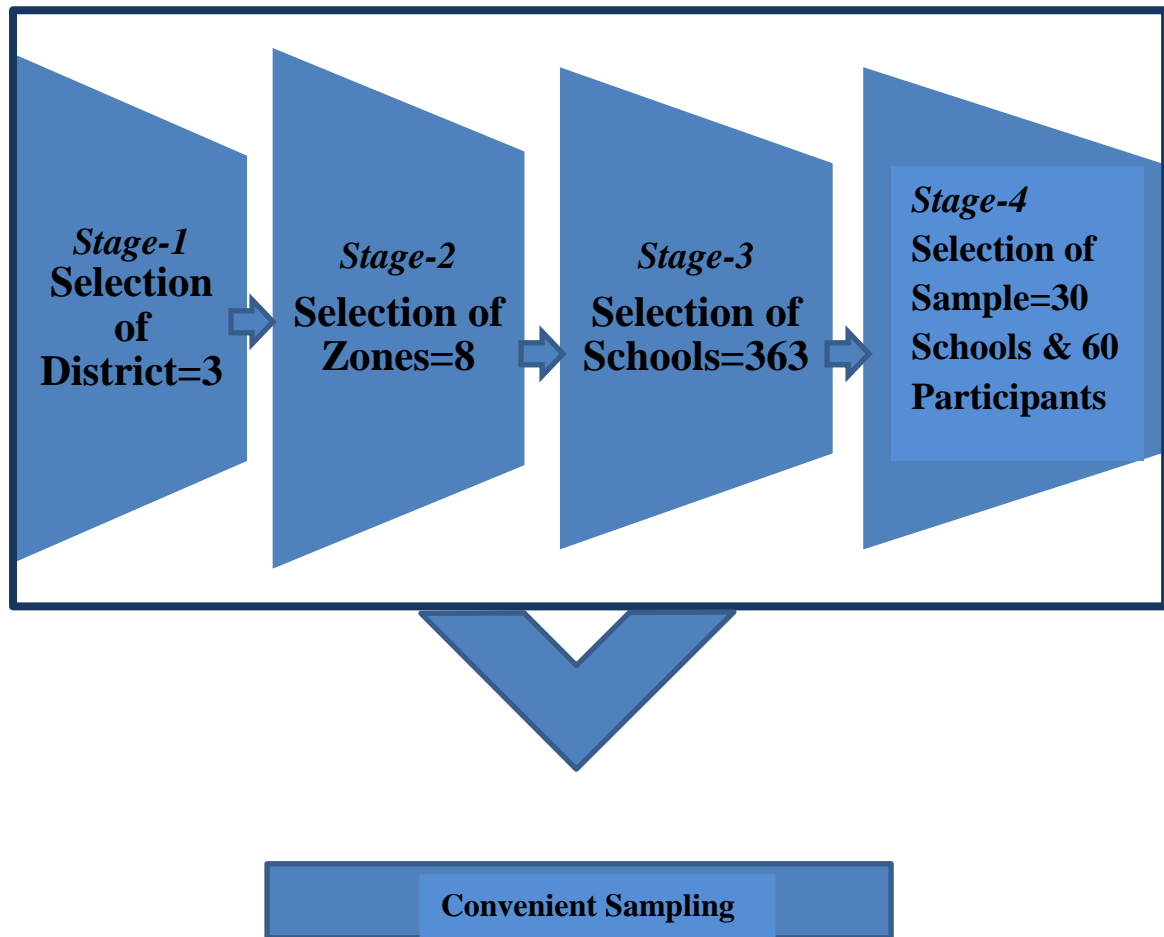
Since the area of the present study was entire state of New Delhi and the New Delhi Education department has distributed government inclusive schools in 13 Administrative Districts of the Department of Education in Delhi with 29 zones and there is 1073 government inclusive school in New Delhi. The researcher obtained a list of all the schools in these zones from the website of Delhi Education Department (*Das, Gichuru, & Singh, 2013*). The population (Government inclusive schools of New Delhi) for the study was taken through convenience sampling according to the *Table 3.1:*

Table 3.1

Districts and Zones-wise total no. of Govt. Inclusive Schools in New Delhi

S. No.	District	Zones	Total No. of Schools	Sample Special Education Teacher=1 School Head=1
1.	East	1	25	
		2	64	
		3	28	
2.	North East	4	43	10 Schools = 2*10
		5	46	
		6	43	
3.	North	7	39	
		8	26	
4.	North West A	9	61	
		10	51	
5.	North West B	11	35	10 Schools = 2*10
		12	52	
		13	47	
6.	West A	14	19	
		15	21	
		16	19	
7.	West B	17	41	
		18	42	
8.	South West A	19	17	
		20	24	
9.	South West B	21	50	
		22	50	
10.	South	23	41	10 Schools = 2*10
		24	31	
11.	New Delhi	26	3	
12.	Central	27	25	
		28	33	
13.	South East	25	33	10 Schools = 2*10
		29	64	
Total	13	29	1073	30 Schools, 60 Participants

Figure 3.2: Stages of Sampling



3.6 Selection of Subject

The study comprised 60 teachers conveniently from 30 govt. school of New Delhi. It was observed during the study that there was no legal or educational definition of inclusive schools in New Delhi but in its government schools, the “Directorate of Education” (DoE) provides Inclusive Education and need-based Educational Supports to children with disabilities (CwDs). The Department of Education is implementing an inclusive education policy in accordance with the provisions of the “Right to Education Act” (RTE) of 2009 and the “Rights of Persons with Disabilities Act” (RPwD) of 2016. According to the Department of Education, the appropriate government and local authorities must make every effort to ensure that all educational institutions funded or recognised by them provide inclusive education to children with disabilities, and to that end, all buildings, campuses, and other facilities must be

accessible. So the state had declared all the government school situated in its territory as inclusive school. There are 13 districts in New Delhi and these 13 districts are divided into 29 zones with 1073 govt. inclusive schools. The researcher informed the selected school heads of each school about the purpose of the study and the consent to conduct the research was obtained. The subject were also informed about the objectives of the study and assured that their responses will be kept confidential and will be used only for research purposes. The sample subjects were called in the office of the school head for data collection. The total number of intellectually disabled student found in sample schools has been shown in *table 3.2*:

Table 3.2

‘Total no. of intellectually disabled students in Secondary school level (IX-X) th in the sample Schools’

<i>S. No.</i>	<i>Name of the School</i>	<i>Total no. of Intellectually disabled Students</i>
1.	Government Girls Senior Secondary School, Loni road, East Gokulpur,	5
2.	Government Girls Senior Secondary School, Khajoori Khas,	3
3.	Sarvodaya Bal Vidyalaya, Yamuna Vihar, Block B, No.1	4
4.	Sarvodaya Bal Vidyalaya, Shahadara, G.T. Road (Gandhi Memorial),	10
5.	Government Boys Senior Secondary School, Shahadara, Shivaji Park	8
6.	Government (Co-ed) Middle School, New Seelampur, Gurudwara Road,	3
7.	Government Girls Senior Secondary School, Old Seemapuri, Block GH	6
8.	Govt. Boys Sec. School, Meet Nagar-B-Block, Delhi-94	4
9.	Government Senior secondary school (Co-ed), Sainik Vihar	5
10.	Government(Co-ed) Secondary School, Sultanpur Majra	2
11.	Government Boys Senior Secondary School, Mubarkpur Dabas, No.1	7
12.	Sarvodaya Vidyalaya, Rohini, Sector 9 (shaheed capt. Sanjeev Dahiya)	4
13.	Govt. Sarvodaya Co-ed Vidyalaya, Rohini, Sector 15	6

14.	Sarvodaya Co-ed Vidyalaya, Rohini, Sec-4	5
15.	Sarvodaya Co-ed Vidyalaya, Shahpur Jat	2
16.	Sarvodaya Bal Vidyalaya, Saket, Block J (Vir Chander Singh Garhwali)	15
17.	Sarvodaya Bal Sr. Sec. Vidyalaya, Mehrauli Qutab,	8
18.	Sarvodaya Co-ed Vidyalaya, R.K. Puram, Sector 2	5
19.	Government Boys Senior Secondary School, Vasant Kunj	2
20.	Government Boys Senior Secondary School, Sangam Vihar	3
21.	Sarvodaya Kanya Vidyalaya, Deoli- (Bachhan Prasad)	9
22.	Government Boys Senior Secondary School, Dera	3
23.	Government Boys Senior Secondary School, Jangpura	7
24.	Sarvodaya Kanya Vidyalaya, Defence Colony, Block A	8
25.	Rajkiya Pratibha Vikas Vidyalaya, INA Colony	11
26.	Sarvodaya Kanya Vidyalaya, Kalkaji, No.1, (Veer Savarkar)	6
27.	Government (Co-Ed) Senior Secondary School, Lajpat Nagar	12
28.	Sarvodaya Kanya Vidyalaya, Sangam Vihar, J-Block	7
29.	Government Boys Senior Secondary School, Chitranjan Park	3
30	Government Boys Senior Secondary School, Dr. Ambedkar nagar, Sector-1, Tigri	5
	Total	178

3.7 Development and Description of the Tools

In the construction of a tool, the researcher considered the purpose- general or specific, area, age class level etc. The first stage is planning at which the purpose, time, cost, nature of sample, types and number of items and how to scored items are considered. Then a preliminary draft of many items of suitable difficulty is prepared. The draft was submitted to the expert for evaluation; after embodying their suggestions, the draft was tried out on a sample indicating the good items. The next stage is of item analysis and its purpose is to improve the validity and reliability. In this study, for data collection for research questions, various methods and procedures were used.

Draft-1 Planning

The Researcher comprehensively studied online research papers, articles and journals to understand the different nuances of Intellectual Disability in education. Based on daily experiences, various suggestions were made by researchers with relevant literature also included for the development of tools. The tools were Semi-Structured Interview and Observation schedule prepared for Teachers; broad themes were kept in mind. Questions and statements were framed on these particular themes such as the relevance of Social, Psychological & Learning environment affecting the learning of intellectually disabled students, experiences of teachers, and different dimensions such as awareness level, training programs, implementation of schemes, and skills development & vocational training. To serve the purpose of the present study following tools as per objectives were used. For the purpose of data collection, the tools chosen for the present study were:

Table-3.3 Data Collection tools and targeted perspectives

Tool	Target
Observation-Schedule	<ul style="list-style-type: none">• Observation schedule for physical verification and to discover the support structures of government schools in New Delhi for children with intellectual disability
Semi-Structured Interview	<ul style="list-style-type: none">• Discover different perceptions of teachers and School heads with respect to factors affecting the learning of students with intellectual disability.• Educational Barriers (Psychological, Social, and Learning Environment)• To identifying the skills of teachers needed to enhance learning

1. Observation Schedule

And observation schedule is something like a questionnaire but in the former; the researcher ask question in a face to face situation. In a schedule there is scope for elaboration and explanation of the purpose of the research and then a rapport is established between the researcher and respondent or a group of respondents and their responses are recorded. The investigator initially developed up schedule of 70 items on the basis of contained in the document of education doctorate of New Delhi. After that draft was given to language and subject expert. On the basis of expert opinion and suggestions the researcher edited the first draft. During the edition process some items were deleted, some were replaced and the language of some items was revised. The final draft with necessary direction printed on top of the first page has 61 items divided into 8 dimensions related to the present study. This observation schedule demonstrates that itsorts accurate information based on inclusive education provisions in Delhi government schools. The schedule items were to be answered 'yes' or 'no,' and the scoring was done by assigning a score of '1' to each yes or no response, indicating that the standard was not being implemented by the concerned school.

Reliability: SPSS was used to determine the reliability of the scheduled observation. To ensure the tool's dependability, the split-half approach and cronbach's Alpha were used. The split-half method's dependability was determined to be 0.73. Cronbach's Alpha has a reliability coefficient of 0.78. A copy of observation schedule has been given in the appendix.

2. Semi-Structured Interview

Another research instrument used was semi-structured Interview, to state participants' views of, experiences in personal, professional and social environment. Initially 50 questions were framed for the Interview, of which 14 questions were rejected and only 36 questions were finalized by incorporating experts' suggestions. A pilot study was conducted on a small group of 15 sample subject to make sure that the content and language of the items was clear, understandable and error-free.

3.8 Data Collection

The Data was collected in two phases:

Phase 1: In this phase of data collection, permission was sought from the school authorities for administering the tools by submitting a recommendation letter provided by the Dean of the Department of researcher's Institution. School authority was co-operative and kind enough to ask a single query of the researcher regarding her suitability and available schedule to collect data.

Phase 2: Data collection procedure started from October 10 to 15 November, 2021. In this phase of data collection, researcher took telephonic and face to face interviews both types of sample i.e. special education teachers as well as school heads of respected schools and then observations were done. The observation schedule was filled up by the investigator herself after having interaction with the sample subject and inspecting the school physically as well as verifying the data from school records; in order to understand the provided facilities in govt. schools and teacher's perceptions for psychological, social and learning environmental factors affecting the learning of intellectually disabled students in inclusive settings. And it was clearly informed them that data would be an anonymous depiction. Thus, it can be said that the responses of teachers and principals were authentic, having no prejudices.

3.9 Evaluation and Scoring of Data

The data was analysed using the following Data Analysis Techniques into several steps: The study's final results were analysed using qualitative analysis. Teachers' Perceptions of Intellectual Disability (TPID) Interview Statements were qualitatively analysed by evaluating and grouping the results into topics for further description and analysis. Thematic content analysis was employed because it highlights both the similarities and contrasts observed in the educators' replies and connects them to the research's main topics (*Breakwell, Hammond, Fife-Schaw & Smith, 2006*). Within a collection of data, thematic analysis was utilized to uncover, analyze, and report themes. It can arrange and explain the data set in great detail with minimum effort (*Braun & Clarke, 2006*). Data was analysed by reading and re-reading the 36 question responses, assigning codes to segments of the data, and then identifying

emergent themes to boost the validity and dependability of the results (*Maxwell, 1992*).

3.10 Handling Ethical Issues

In qualitative research, especially when using descriptive methods, ethical considerations such as anonymity, safety, and well-being of respondents remain the researcher's first priority throughout the data collection process. Because the key informants were special education teachers and school administrators, the researcher kept the respondent's identity private. The respondent's confidentiality has been protected throughout the report writing process, and their original identity has not been revealed. Many special education instructors were first hesitant to share the knowledge, but as personal bonding grew, these fears dissipated. They realized that the information they gave me would be kept private and would not be shared with anyone. The responder was also told that their disclosure of impressions and experiences, which would be published in a report, would conceal their identities and guarantee total anonymity. As a result, the respondent's name has been concealed when producing a report in order to protect their privacy and adequately address the ethical problem