

CHAPTER 3

3 METHODOLOGY OF THE STUDY

3.1 INTRODUCTION

In the preceding chapter, the problem, its statement, related literature, objectives, research questions and delimitations were discussed. This ongoing chapter treats the method and procedure employed in this study. It includes design of the study, sampling techniques, description of tools, variables, data collection procedure, procedures and statistical techniques used for the analysis of the data.

3.2 DESIGN OF THE STUDY

For carrying out any kind of research, it is important to draw a design. According to Kumar R. (2011), 'A research design is a procedural plan that is adopted by the researcher to answer questions validly, objectively, accurately and economically.' Therefore a research design answers questions that would determine the path a researcher proposing to take for her/his research journey.

This study is a descriptive survey and it's a mixed-method research type. Mixed method research is the combination of both qualitative and quantitative research approaches by including both qualitative and quantitative data in a single study. The purpose of mixed method research is to build on the synergy and strength which exists in between both qualitative and quantitative methods to understand a phenomenon more clearly than using either any one of the methods alone. In this study the researcher is using an adopted with light contextualized 3-point Likert's scale. The responses will be analyzed quantitatively by

using statistical procedure. Whereas I also did interview to students, parents and teachers by using semi structured questionnaires. The responses will be used to analyze qualitatively. Due to use of both the approaches, the present study is considered as a mixed- method research type.

It is descriptive because it aims to describe the nature and present status of the phenomenon with the intent of employing data to justify current conditions and practices or to make better plans for improving them. According to Kumar R. (2011), 'A descriptive study is in which the main focus is on description, rather than examining relationships or associations, is classified as a descriptive study. A descriptive study attempts systematically to describe a situation, problem, phenomenon, service or program, or provides information about, say, the living conditions of a community, or describes attitudes towards an issue.

3.3 POPULATION

A research population refers to any collection of a well specified group of human beings or non-human entities known to have similar characteristics or traits. Cox and West (1986) described a population as a well-defined group of people or objects that share common characteristics. To test each unit of the population is impracticable in order to arrive at principles having universal validity because some population is too large to study and besides dependable results can be obtained by studying a small portion of the population. Therefore we must usually be content with the samples drawn from the population.

3.4 SAMPLE

A sample is a small subset of the population that has been chosen to be studied. It is the representative proportion of a population. The main function of the sample is to allow the researchers to conduct the study on the individuals selected from the population so that the results of the study can be used to derive conclusions that will apply for the entire population. By studying sample some inferences are drawn about the population and consequently generalizations are made on the basis of information obtained from the study of one or more samples.

According to Kumar R. (2011), 'Sampling is the process of selecting a few respondents (a sample) from bigger group i.e. the sampling population to become the basis for estimating the prevalence of information of interest to you.' Sampling makes possible to estimate the characteristics of a larger group (population) by examining the characteristics of a smaller group which is a sample, drawn from this larger group. So sampling is the most important aspect of the total methodology followed in a particular research study. The Descriptive research has been used to find out the answers of the questions through the analysis of variable relationships. Thus, the sampling type appropriate to the present study is stratified random sampling. It's the method of sampling which involves dividing a population into small homogenous groups. There are many secondary school students are there at researchers hometown Paralakhemundi. But many of them haven't able to get proper infrastructure and accessibility of internet as well accessibility of electronic gadgets. So the researcher stratified the population into a group of secondary school students (class 9th and 10th) of Jawahar Navodaya Vidyalaya, Gajapati and Kendriya Vidyalaya Gajapati. Sampling size is the number of students, families or electors from whom the researchers obtain the

required information. According to Kumar R. (2011), the number of individuals from whom researcher obtain the required information is called the sample size and is usually denoted by the letter n . In this study there are 60 respondents, among them 52 respondents are from class 10th and 8 are from class 9th.

3.5 VARIABLES

Variables are those attributes of objects, events, things and beings, which can be measured. Thus, variables are the characteristics or conditions that are observed, manipulated or controlled by the investigator. A research question aims to ask about the relationship between two or more variables. In order to arrive at the expected answer to the research objectives, research questions are formulated where the answers will determine the expected relationship between the independent and dependent variables.

3.5.1 Independent Variable

The independent variable is responsible for bringing about the changes. This variable is the cause of changes in a phenomenon. In the study of causality, the independent variable is the cause variable which is responsible for bringing about change in a phenomenon. In this study the 'online learning during pandemic COVID-19' is the independent variable. Because it's tried to find out in the study that, how online learning during pandemic is affecting the adolescence students who are attending online classes.

3.5.2 Dependent Variables

The dependent variable is the outcomes or changes brought about by introducing an independent variable. In the study of causality through a study, the variable in which the independent variable produces changes is called dependent variables. In this study the 'psychological impact with respect to 'mood swings', 'depression' and 'anxiety'

on secondary school students is dependent upon the online learning during COVID-19. So, here the online learning is independent and the researcher assumes and tries to find out whether it is responsible for the psychological changes in students. The investigator has made an attempt to find out the combined predictive value of these independent variables for the psychological impact of the students under study and draw conclusions.

3.6 TOOLS USED

The dependability of research findings is not only determined by planning, methodology, data analysis and interpretation but also by tools that are used to collect information or data. In a research study, while selecting research tools many considerations have to be kept in mind- such as objectives of the study, the time to be devoted to the study, availability of suitable tools etc. In the present study following tools are used while collecting the data.

3.6.1 Self-prepared 3-point Likert's scale

According to Kumar R. (2011), Likert's scale is one of the attitudinal scales designed to measure attitudes. This scale is based upon the assumption that each statement/item on the scale has equal attitudinal 'value', 'importance' or 'weight' in terms of reflecting attitude towards the issues in question.

In the study the researcher at first decided to measure the attitude by using a self-prepared 3-point Likert's Scale. There are 3 different categorical Likert's scales are prepared to measure different psychological characteristics like anxiety, depression and mood swings.

3.6.2 Semi structured interview schedule

Interviewing is a commonly used method of collecting information from people. In many walks of life we collect information through different forms of interaction with others. Any person-to-person interaction, either face to face or otherwise, between two or more individuals with a specific purpose in mind is called an interview. In the present study the researcher used semi structured interview questions for students, teacher and parents. The strength of semi structured interviews is the almost complete freedom they provide the terms of content and structure. The researcher is free to order these in whatever sequence s/he wishes. Respondents are asked to answer freely without any hesitation. Their responses were noted down and also recorded with their permission for further use.

3.7 VALIDITY OF THE TOOLS

Each question of the item on the research instrument has a link with the research objectives. As there is an establishment of link between the objectives and items of the tool, thus the 'face validity' is established. Again the items and questions cover the full range of the issue or attitude being measured. The semi structured interview questions and self-prepared 3-point Likert's scale are judged by the researcher's guide (expert in the field). Hence the 'content validity' is established.

3.8 DATA COLLECTION PROCEDURE

Data collection is a term used to describe a process of preparing and collecting data. Its purpose is to obtain information to keep on record to make decisions about important issues and to pass information on to others. Data may be collected through

different techniques like classroom achievement tests, interviews, schedules and standardized tests etc.

Principals of the schools (Jawahar Navodaya Vidyalaya, Gajapati and Kendriya Vidyalaya Gajapati) were contacted with the college given permission letter to seek their cooperation for collecting data of the study. The testing conditions for all the students were kept as constant and uniform as possible. Due to the restricted COVID-19 the researcher is permitted only for a few days. Researchers went to JNV and distributed the printed Likert's scale among 10th students, those who were attending online classes. Instructions for each tool, as mentioned in the test manual, were read out to the subjects and they were also requested to go through the instructions printed at the cover page of each tool. At that time, researchers also took interviews of students and teachers. Then to interview class 9th students, researchers went to the student's home and interviewed both parents and students. A group for class 9th students was made in WhatsApp and there the link of Google form is shared. That Google form was the exact copy of 3-point Likert's scale. Due to COVID-19 guidelines researchers were forced to collect the responses online. The data collected through both by going to the field as well as through online. After collecting the data the researcher transcribed and then translated them for analysis.

3.9 DATA ANALYSIS PROCEDURE

Quantitative data obtained from the questionnaire by using Likert's scale was analyzed in order to provide a contextual framework of the students view towards online learning .This data was then analyzed alongside the qualitative data gathered through the semi-structured interview questionnaires. The researcher took the response of students assembled in the pie chart of each question from the Likert's scale. Then she took the interview responses and

described them by matching the statistical response to the interview responses of respondents. By this way the researcher discussed about the findings one by one.

3.10 LIMITATIONS

As the research is performed during the pandemic COVID-19 period, the researcher is allowed only for very few days to the school. The minimum data is the limitation of the study.