It is more appropriate to determine the *extent* of a problem, issue or phenomenon by quantifying the variation.
e.g. how many people have a particular problem? How many people hold a particular attitude?
Unstructured approach:
The unstructured approach to inquiry is usually classified as *qualitative research.*
This approach allows flexibility in all aspects of the research process.

It is more appropriate to explore the *nature* of a problem, issue or phenomenon *without quantifying it.*
Main objective is to describe the *variation* in a phenomenon, situation or attitude.
e,g, description of an observed situation, the historical enumeration of events, an account of different opinions different people have about an issue, description of working condition in a particular industry.

Both approaches have their place in research. Both have their strengths and weaknesses.

In many studies you have to combine both qualitative and quantitative approaches.

For example, suppose you have to find the types of cuisine / accommodation available in a city and the extent of their popularity.

Types of cuisine is the qualitative aspect of the study as finding out about them entails description of the culture and cuisine

The *extent of their popularity* is the quantitative aspect as it involves estimating the number of people who visit restaurant serving such cuisine and calculating the other indicators that reflect the extent of popularity.

Identifying Variables:

In a research study it is important that the concepts used should be operationalised in measurable terms so that the extent of variations in respondents' understanding is reduced if not eliminated.

Techniques about how to operationalise concepts, and knowledge about variables, play an important role in reducing this variability.

Their knowledge, therefore is important in 'fine tuning' your research problem.

For example:
-'Jet Airways' is a perfect example of *quality* cabin service.
- Food in this restaurant is *excellent.*
- The middle class in India is getting more *prosperous.*

When people express these feelings or preferences, they do so on the basis of certain criteria in their minds. Their judgement is based upon indicators that lead them to conclude and express that opinion.
These are *judgements* that require a sound basis on which to proclaim. This warrants the use of a measuring mechanism and it is in the process of measurement that knowledge about *variables* plays an important role.

The definition of a variable:

An image, perception or concept that can be measured – *hence capable of taking on different values*- is called a *variable.*

The difference between a concept and a variable:

Concepts are mental images or perceptions and therefore their meaning varies markedly from individual to individual.
A concept cannot be measured whereas a variable can be subjected to measurement by crude/refined or subjective/objective units of measurement.
It is therefore important for the concept to be converted into variables .

Concept	**Variable**
-Subjective impression -No uniformity as to its Understanding among Different people	- Measurable though the degree of precision varies from scale to scale and variable to variable.

Types of measurement scales:

Measurement is central to any enquiry.

The greater the refinement in the unit of measurement of a variable, the greater the confidence, *other things being equal*, one can place in the findings.

S.S.Stevens has classified the different types of into four categories:

- Nominal or classificatory scale
- Ordinal or ranking scale
- Interval scale
- Ratio scale

The nominal or classificatory scale:

A nominal scale enables the classification of individuals, objects or responses into subgroups based on a common/shared property or characteristic.

A variable measured on a nominal scale may have one, two or more subcategories depending upon the extent of variation.

For example, '*water*' or '*tree*' have only one subgroup, whereas the variable "*gender*" can be classified into two sub-categories: *male and female*. '*Hotels*' can be classified into ---- sub-categories.

The sequence in which subgroups are listed makes no difference as there is no relationship among subgroups.

The ordinal or ranking scale:

Besides categorizing individuals, objects, responses or a property into subgroups on the basis of common characteristic, it ranks the subgroups in a certain order.

They are arranged either in ascending or descending order according to the extent a subcategory reflects the magnitude of variation in the variable.

For example, 'income' can be measured either quantitatively (in rupees and paise) or qualitatively using subcategories 'above average', 'average' and 'below average'. *The 'distance' between these subcategories are not equal as there is no quantitative unit of measurement.*

'Socioeconomic status' and 'attitude' are other variables that can be measured on ordinal scale.

The interval scale:

An interval scale has all the characteristics of an ordinal scale. In addition, it uses a unit of measurement with an arbitrary starting and terminating points.

For example,

Celsius scale: 0*C to 100*C

Fahrenheit scale: 32*F to 212*F

Step 4. PREPARING THE RESEARCH DESIGN

Research design is the conceptual structure within which research would be conducted.
The function of research design is to provide for the collection of relevant information with minimal expenditure of effort, time and money.

The preparation of research design, appropriate for a particular research problem, involves the consideration of the following :

1. Objectives of the research study.
2. Method of Data Collection to be adopted
3. Source of information—Sample Design
4. Tool for Data collection
5. Data Analysis-- qualitative and quantitative

1. **Objectives of the Research Study:** Objectives identified to answer the research questions have to be listed making sure that they are:
a) numbered, and
b) statement begins with an action verb.

2. **Methods of Data Collection:** There are two types of data
Primary Data— collected for the first time
Secondary Data—those which have already been collected and analysed by someone else.

Methods of Primary Data Collection

OBSERVATION METHOD:
Commonly used in behavioural sciences
It is the gathering of primary data by investigator's own direct observation of relevant *people, actions and situations* without asking from the respondent.
e.g.

- *A hotel chain sends observers posing as guests into its coffee shop to check on cleanliness and customer service.*

2. Classification- a process of arranging data in groups or classes on the basis of common characteristics. Depending on the nature of phenomenon involved

   a) *Classification according to attributes*: here data is analysed on the basis of common characteristics which can either be

      : *descriptive* such as *literacy, sex, religion etc.* or
      : *numerical* such as *weight, height, income etc.*

   Such classification can be either:

S*imple classification:* where we consider only one attribute, and divide the universe into two classes—one class consisting of items possessing the given attribute and the other class consisting of items which do not possess the given attribute.

Table 1. Hotel Employees with MBA Degree

	Yes	No	Total
MBA Degree	21	9	30

Manifold classification: Here we consider two or more attributes simultaneously, and divide the data into a number of classes.

Table 2. Educational Qualification of Hotel Employees

	Yes		No		Total	
	M	F	M	F	M	F
MBA Degree	12	9	3	6	15	15
B.Sc. H&HA	15	15	0	0	15	15

   b) *Classification according to class –intervals*: is done with data relating to *income, age, weight, tariff, production, occupancy etc.* Such quantitative data are known as the *statistics of variables* and are classified on the basis of class –intervals.

Certified that this research project titled----------
---------- is the bonafide record of work carried out by---------- for final year B.Sc.Hospitality and Hotel Administration.

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Technical Guide	*Research Coordinator*	*Principal*

Place---------- *Date----------*

Typing and Binding of Research Project Report:

Paper: Bond Paper (need not be executive bond)

Size: 8.5inches X 11 inches

Margin: Left- 1.5 inch
Top- 1 inch
Bottom 1 inch
Right 1 inch

Font: Times New Roman

Font Size: 12

Spacing: Double

Binding: Black Rexin

Gold Embossing on Cover:

Research Title
Student Name
Name of Institute
Year of Submission