QUANTITATIVE METHODS

MODULE CODE: BIT 125

WELCOME

DEEPAK BASTOLA

LECTURER

TEXAS COLLEGE MANAGEMENT AND IT

COURSE CONTENTS

CHAPTER 03

CLASSIFICATION AND DISTRIBUTION OF DATA

- ☐ Classification procedure:

  qualitative and quantitative classification

- ☐ Tabulation of data

3 Lectures Hours

CLASSIFICATION OF DATA

Classification is the first step after collection and editing of data. Classification of Data is the process of organizing data into categories for its most efficient and effective use.

Data are often discussed in terms of Variables , where a variable is any characteristic that varies from one member of a population to another. For example height in centimeters is a variable which varies from person to person.

Classification helps for the simplification and briefness of data; it enhance the utility of data.

Data can be classified into four ways:

1. Geographical Data (Based on location/area)
2. Chronological Data (Based on time)
3. Quantitative Data (Gives numerical value)
4. Qualitative Data (Based on attributes)

CLASSIFICATION OF DATA

QUANTITATIVE DATA

Quantitative Classification refers to the classification of data according to some characteristic which can be measured such as heights, weights, income, profits etc. This data is any quantifiable information that can be used for mathematical calculations and statistical analysis, such that real-life decisions can be made based on these mathematical derivations. Quantitative data is used to answer questions such as "How many?", "How often?", "How much?".

For Example:

Students of BIT 2nd Semester of Texas College of Management and IT according to the weight.

Age (in years)	No. of student
40 – 50	40
50 – 60	75
60 – 70	60
70 – 80	25

QUANTITATIVE DATA

Quantitative data can be divided into two subgroup.

1. Discrete Data

Discrete data usually be counted in a finite matter.

For Example:

- The number of children you want to have. It may be 0 or 1 or 2 or may be 7.

- The number of student in BIT 2nd semester or in Texas College of Management and IT.

2. Continuous Data

Continuous data can take any value in a certain range.

For Example:

- Temperature of a day

- Weight of a person

Number of people in a race is a discrete variable but time taken to run a race is a continuous variable.

QUANTITATIVE DATA

Key Differences Between Discrete and Continuous Data

- Discrete data is the type of data that has clear spaces between values. Continuous data is data that falls in a continuous sequence.
- Discrete data is countable while continuous data is measurable.
- Discrete data contains distinct or separate values. On the other hand, continuous data includes any value within range.
- Discrete data is graphically represented by bar graph whereas a histogram is used to represent continuous data graphically.
- Overlapping or mutually exclusive classification, such as 10-20, 20-30,.., etc. s done for continuous data. As opposed to, non-overlapping or mutually inclusive classification like 10-19,20-29,…., etc. is done for discrete data.

QUANTITATIVE DATA

Identify each of the following as continuous or discrete

1. Weight of a body
2. Length of a rod
3. Number of chairs in the room
4. Number of possible outcomes in throwing a die
5. Number of hairs on your head
6. Amount of sales in a business firm
7. All rational numbers
8. Lifetime of television tubes and batteries
9. Number of passengers in a plane.

CLASSIFICATION OF DATA

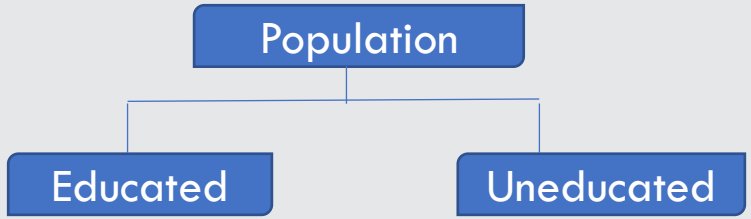
QUALITATIVE DATA

Qualitative Classification of data are classified based on some attributes or quality such as sex, color, literacy, religion etc. In this type of classification the attributes under the study can't be measured numerically.

Quantitative data can be divided into two subgroup.

1. Simple Classification

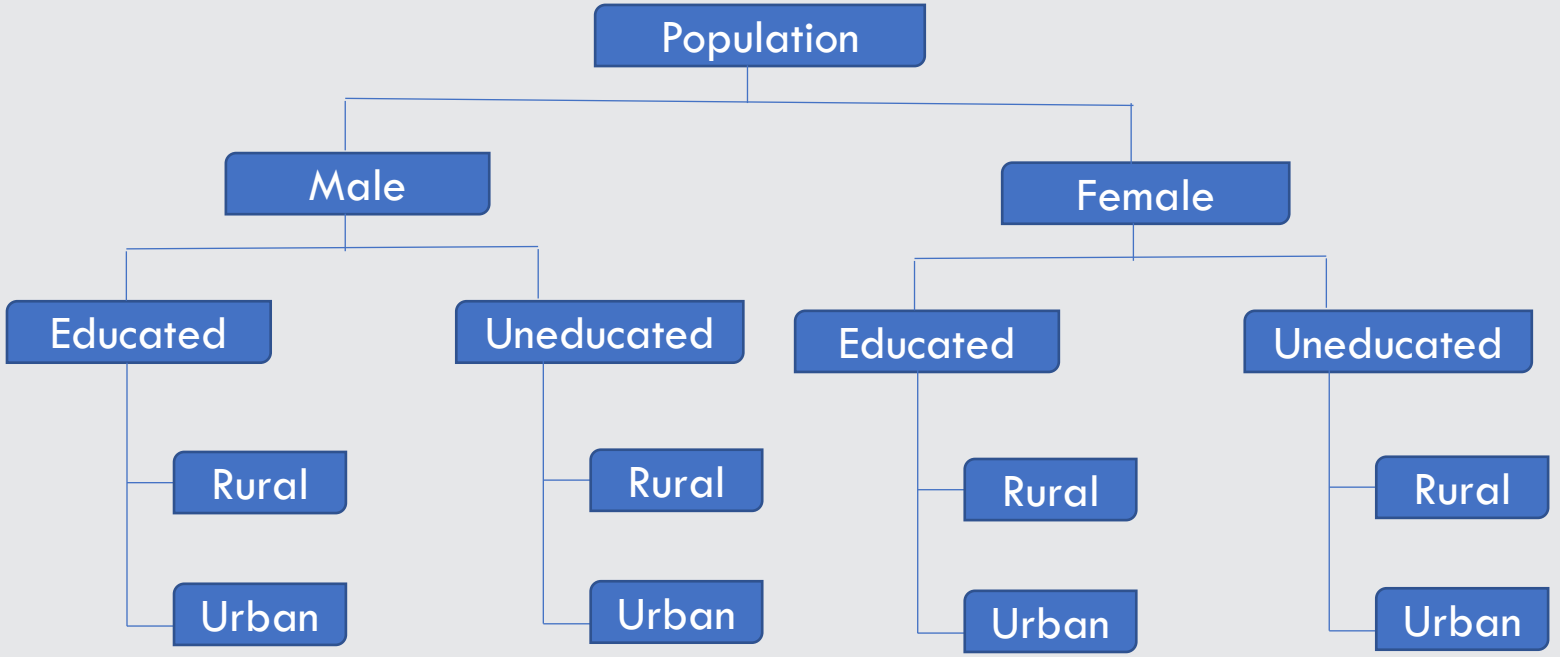
It is also known as classification according to Dichotomy. When data (facts) are divided into groups according to their qualities, the classification is called as 'Simple Classification'.



CLASSIFICATION OF DATA

2. Manifold or Multiple Classification

In this method data is classified using one or more qualities. First, the data is divided into two groups (classes) using one of the qualities. Then using the remaining qualities, the data is divided into different subgroups.



CLASSIFICATION OF DATA

Classify the following as quantitative or qualitative data

1. Color of the eye
2. Number of typewriters in a room
3. Address
4. Age of teachers
5. Rank of students
9. Speed of a car
10. Score in mathematics examination


Backspace
Thank You
Texas
College of Mgmt & IT
Page Up
Home
Page Down
Shift
Insert