

Lecture 2

GLA
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Mathura

Dr. Manoj
Kumar

Outline of
Lecture 2

Collection of
data

Classification
of data

References

Lecture 2

Dr. Manoj Kumar

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Outline of Lecture 2

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References

1. Collection of data.
2. Classification of data.
3. Graphical Representation of data

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Collection of data

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Data: Data may be defined as facts or information collected for analysis and interpretation for a specific purpose in mind.

Data can be classified as either primary or Secondary.

Primary data: Primary data are original data which is collected for the first time by the investigator for the purpose of a specific statistical investigation. Thus, primary data is called first-hand information or original data

“Data originally collected in the process of investigations are known as primary data” by Wessel, Willet and Simone.

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Secondary data: Secondary data are those data that have already been collected by others, for purposes other than the solution of the problem in hand.

“Data collected by other persons are called secondary data” by Wessel.

Secondary data can be collected from external sources such as magazines, newspapers, reviews, research articles, T.V., radio, Internet and so on.

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Data can be classified on the basis of the following four modes.

1. Geographical, i.e., area wise or region wise.
2. Chronological, i.e., w. r. to occurrence of time.
3. Qualitative, i.e., by the character or by attribute.
4. Quantitative, i.e., by magnitudes.

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Variables

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Data is classified as a variable if the observations in the data vary.

There are two types of variables

1. Discrete variables, 2. Continuous variable.

Discrete variables: Discrete variables is a variable that can assume only a finite no. of values. In other words, a discrete variable can assume integral values and is capable of exact measurement.

For example: The no. of student in a class, the no. of children in a family, etc.

Continuous variables: Continuous variables is a variable that can assume any values (integral as well as fraction) in some specified interval or range.

For example: The heights and weights of the students in a class represents continuous variables.

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Frequency Distribution

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A frequency distribution is a convenient way of presenting a large mass of data in tabular form by grouping the data.

There are two types of frequency distribution, viz, discrete and continuous.

Discrete Frequency Distribution (or Ungrouped Data):

A frequency distribution represented by a discrete variable is called a discrete frequency distribution.

If X is discrete variable that can take on values x_1, x_2, \dots, x_n with the corresponding frequencies f_1, f_2, \dots, f_n then the frequency distribution of X is given by

$X :$	$x_1,$	x_2, \dots	x_n
Frequency:	$f_1,$	f_2, \dots	$f_n.$

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For example: Frequency Distrubution of no. of children

no. of Children	no. of Families
0	8
1	20
2	15
3	5
4	2
Total	50

Continous Frequency Distrubution:

A frequency distrubution represented by a continous variable is called a continous frequency distrubution.

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Total	50
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For example: Freq Dist of Heights of 50 Students
Height (cm) no. of students (frequency)

155 – 156	2
157 – 158	4
159 – 160	9
161 – 162	14
163 – 164	10
165 – 166	7
167 – 168	3
169 – 170	1
Total	50

bibliography

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