

SOS POLITICAL SCIENCE & PUBLIC ADMINISTRATION

M. A PUBLIC ADMINISTRATION IV SEM

RESEARCH METHODOLOGY (403)

UNIT-IV

TOPIC NAME-TABULATION & CLASSIFICATION

Meaning of Tabulation :

Tabulation is a systematic & logical presentation of numeric data in rows and columns, to facilitate comparison and statistical analysis. It facilitates comparison by bringing related information close to each other and helps in further statistical analysis and interpretation.

To put it in other words, the method of placing organised data into a tabular form is called as tabulation. It may be complex, double or simple depending upon the nature of categorisation.

Definition of Tabulation-

Tabulation refers to a logical data presentation, wherein raw data is summarized and displayed in a compact form, i.e. in statistical tables. In other words, it is a systematic arrangement of data in columns and rows, that represents data in concise and attractive way. One should follow the given guidelines for tabulation.

.A serial number should be allotted to the table, in addition to the self explanatory title.

.The statistical table is required to be divided into four parts, i.e. Box head, Stub, Caption and Body. The complete upper part of the table that contains columns and sub-columns, along with caption, is the Box Head. The left part of the table, giving description of rows is called stub. The part of table that contains numerical figures and other content is its body.

.Length and Width of the table should be perfectly balanced.

.Presentation of data should be such that it takes less time and labor to make comparison between various figures.

.Footnotes, explaining the source of data or any other thing, are to be presented at the bottom of the table.

Objects of Tabulation-

(1) To Simplify the Complex Data

- It reduces the bulk of information i.e. raw data in a simplified and meaningful form so that it could be easily by a common man in less time.

(2) To Bring Out Essential Features of the Data

- It brings out the chief/main characteristics of data.
- It presents facts clearly and precisely without textual explanation.

(3) To Facilitate Comparison

- Presentation of data in row & column is helpful in simultaneous detailed comparison on the basis of several parameters.

(4) To Facilitate Statistical Analysis

- Tables serve as the best source of organised data for further statistical analysis.
- The task of computing average, dispersion, correlation, etc. becomes much easier if data is presented in the form of a table.

(5) Saving of Space

- A table presents facts in a better way than the textual form.
- It saves space without sacrificing the quality and quantity of data.

General Rules For Tabulation

- **Each Table must have a number and title**

- **A table should neither be too larger or too small**
- **One purpose for one table**
- **Large number may be approximated**
- **Unites of measurement under each column heading**
- **Space or break for large column tables**
- **Compared value get near**
- **In tables with many columns it will be useful to label the columns with number or alphabets for reference in the text**
- **Stubs should be arranged in some logical orders**
- **Miscellaneous use one column**
- **Use double or thick line for he**

Types of Tabulation

In general, the tabulation is classified in two parts, that is a simple tabulation, and a complex tabulation.

Simple tabulation, gives information regarding one or more independent questions. Complex tabulation gives information regarding two mutually dependent questions.

Two-Way Table

These types of table give information regarding two mutually dependent questions. For example, question is, how many millions of the persons are in the Divisions; the One-Way Table will give the answer. But if we want to know that in the population number, who are in the majority, male, or female. The Two-Way Tables will answer the question by giving the column for female and male. Thus the table showing the real picture of divisions sex wise is as under:

Three-Way Table

Three-Way Table gives information regarding three mutually dependent and inter-related questions.

For example, from one-way table, we get information about population, and from two-way table, we get information about the number of male and female available in various divisions. Now we can extend the same table to a three way table, by putting a question, “How many male and female are literate?” Thus

the collected statistical data will show the following, three mutually dependent and inter-related questions:

1. Population in various division.
2. Their sex-wise distribution.
3. Their position of literacy.

Importance of Tabulation-

1. Under tabulation, data is divided into various parts and for each part there are totals and sub totals. Therefore, relationship between different parts can be easily known.

2. Since data are arranged in a table with a total and used for the required purpose.

3. Tabulation makes the data brief. Therefore it can be easily presented in the form of graphs.

4. Tabulation presents the numerical figures in an attractive form.

Meaning of classification-

Classification is the way of arranging the data in different classes in order to give a definite form and a coherent structure to the data collected, facilitating their use in the most systematic and effective manner. It is the process of grouping the statistical data under various understandable homogeneous groups for the purpose of convenient interpretation. A uniformity of attributes is the basis criterion for classification; and the grouping of data is made according to similarity. Classification becomes necessary when there is diversity in the data collected for meaningful presentation and analysis. However, in respect of homogeneous presentation of data, Definition of Classification may be unnecessary.

Definition of Classification - Classification is the process of arranging data into sequences according to their common characteristics or separating them into different related parts

Objectives of classification of data:

- To group heterogeneous data under the homogeneous group of common characteristics;
- To facility similarity of various group;
- To facilitate effective comparison;
- To present complex, haphazard and scattered dates in a concise, logical, homogeneous, and intelligible form;
- To maintain clarity and simplicity of complex data;
- To identify independent and dependent variables and establish their relationship;
- To establish a cohesive nature for the diverse data for effective and logical analysis;
- To make logical and effective quantification

Types of classification-

A good classification should have the characteristics of clarity, homogeneity, and equality of scale, purposefulness, accuracy, stability, flexibility, and unambiguity.

Classification is of two types, viz., quantitative classification, which is on the basis of variables or quantity; and qualitative classification (classification according to attributes). The former is the way of grouping the variables, say quantifying the variables in cohesive groups, while the latter group the data on the basis of attributes or qualities. Again, it may be multiple classification or dichotomous classification. The former is the way of making many (more than two) groups on the basis of some quality or attributes, while the latter is the classification into two groups on the basis of the presence or absence of a certain quality. Grouping the workers of a factory under various income (class intervals) groups comes under multiple classifications; and making two groups into skilled workers and unskilled workers is dichotomous classification. The tabular form of such classification is known as statistical series, which may be inclusive or exclusive.

The classified data may be arranged in tabular forms (tables) in columns and rows. Tabulation is the simplest way of arranging the data, so that anybody can understand it in the easiest way. It is the most systematic way of presenting numerical data in an easily understandable form. It facilitates a clear and simple presentation of the data, a clear expression of the implication, and an easier and more convenient comparison. There can be simple or complex tables, and general purpose or summary tables. Classification and tabulation are interdependent events in a research.

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Classification of data

The method of arranging data into homogeneous classes according to some common features present in the data is called classification.

A planned data analysis system makes fundamental data easy to find and recover. This can be of particular interest for legal discovery, risk management and compliance. Written methods and set of guidelines for data classification should determine what levels and measures the company will use to organise data and define the roles of employees within the business regarding input stewardship. Once a data-classification scheme has been designed, security standards that stipulate proper approaching practices for each division and storage criteria that determine the data's lifecycle demands should be discussed.

Methods of Classification-

(1) Geographical Classification-When data are classified with reference to geographical locations such as countries, states, cities, districts, etc. it is known as Geographical Classification.

(2) Chronological Classification-grouped according to time, such a classification is known as a Chronological Classification.

In such a classification, data are classified either in ascending or in descending order with reference to time such as years, quarters, months, weeks, etc.

It is also called 'Temporal Classification'

(3) Qualitative Classification-Under this classification, data are classified on the basis of some attributes or qualities like honesty, beauty, intelligence, literacy, marital status etc.

For example, Population can be divided on the basis of marital status as married or unmarried etc.

(4) Quantitative Classification-This type of classification is made on the basis some measurable characteristics like height, weight, age, income, marks of students, etc.

Difference Between classification and Tabulation-

The primary difference between classification and tabulation is that the process of classifying data into groups is known as classification of data, whereas tabulation is the act of presenting data in tabular form, for better interpretation.

After the collection of data is completed, it is prepared for analysis. As the data is raw, it needs to be transformed in such a way, that it is appropriate for analysis. The form of data, highly influences the result of analysis and so, to get positive results, the data preparation should be proper. There are various steps of data preparation, which include editing, coding, classification, tabulation, graphical representation and so on.

For a layperson, classification and tabulation are same, but the fact is they are different, as the former is a means to sort data, for further analysis while the latter is used to present data.

Content: Classification Vs Tabulation

- **Comparison Chart**
- **Key Differences**
- **Conclusion**

Comparison Chart

BASIS FOR COMPARISON	CLASSIFICATION	TABULATION
Meaning	Classification is the process of grouping data into different categories, on the basis of nature, behavior, or common characteristics.	Tabulation is a process of summarizing data and presenting it in a compact form, by putting data into statistical table.
Order	After data collection	After classification
Arrangement	Attributes and variables	Columns and rows
Purpose	To analyse data	To present data
Bifurcates data into	Categories and sub-categories	Headings and sub-headings

Key Differences Between Classification and Tabulation

The paramount differences between classification and tabulation are discussed in the points given below:

The process of arranging data into different categories, on the basis of nature, behavior, or common characteristics is called classification. A process of condensing data and presenting it in a compact form, by putting data into statistical table, is called tabulation.

Classification of data is done after data collection process is completed. On the other hand, tabulation follows classification.

Data classification is based on similar attributes and variables of the observations. Conversely, in tabulation the data is arranged in rows and columns, in a systematic way.

Classification of data is performed with the objective of analysing data in order to draw inferences. Unlike tabulation, which aims at presenting data, to ensure easy comparison of various figures.

In classification, data is bifurcated into categories and sub-categories while in tabulation data is divided into headings and sub-headings.

Conclusion-

When the collection and verification of data is completed on the basis of homogeneity and consistency, it needs to be summarized and presented in a clear and compact manner which highlights the relevant features of data. Both classification and tabulation, enhances the readability and attractiveness of data, by presenting it in a manner that looks more appealing to the eyes.

