forms and symbols. They make pos
and facilitate comparison of values, trends and rela

2.5.1 Functions of a Graph

The tabular presentation of a frequency distribution, of course, reveals features of data precisely but the same is not very effective. In comparison of tabular presentation, the graphic presentation of a frequency distribution facilitates easy understanding of the features of data and can be easily interpretation.

Graphic presentation serves as an easy technique for quick and effective comparison between two or more frequency distributions. When the graph of one frequency distribution is superimposed on the other, the points of contrast regarding the type of distribution and the pattern of variation become quite obvious. These advantages make it necessary to have a clear understanding of the various forms of graphic representation of a frequency distribution.

2.5.2 Advantages and Limitations of Diagrams (Graphs)

According to P. Maslov, '*Diagrams are drawn for two purposes (i) to permit the investigator to graph the essence of the phenomenon he is observing, and (ii) to permit others to see the results at a glance, i.e. for the purpose of popularization*'.

Advantages

1. ***Give an attractive and elegant presentation:*** Many people avoid figures but are always impressed by diagrams because when they see pictures carefully their effect on the mind is more stable. Thus, diagrams give delight to the eye and create interest.
2. ***Leave good visual impact:*** The impression created by a diagram is likely to last longer in the minds of people than the effect created by figures. Thus, diagrams have the merit of rendering any idea readily and greater memorizing value than figures.
3. ***Facilitate comparison:*** While comparing absolute figures, the significance is not clear but when these are presented by diagrams, the comparison becomes easy. In case comparison is neither possible nor necessary, the technique of diagrammatic representation should not be used.
4. ***Save time:*** Diagrams save time and effort which are otherwise needed in drawing inferences from a set of observations in the data set.
5. ***Simplify complexity and depict the characteristics of the data:*** Diagrams are attractive and interesting, and also highlight the characteristics of the data without straining one's mind. The basic features of the data can be understood and inferences can be drawn in a very short time.

Limitations

Often tabular and graphical presentations of data are found in annual reports, newspapers, magazines, bulletins and so on. But inspite of usefulness, few limitations of graphs as a tool for statistical analysis are as under:

1. They provide only approximate features of the data.
2. They cannot be used as alternative to tabulation of data.
3. They can be used only for comparative study.
4. They are capable of representing only homogeneous and comparable data.

2.5.3 General Rules for Drawing Diagrams

It is important to understand how diagrams are prepared and should they be interpreted. The following general guidelines are taken into consideration while preparing diagrams:

- ***Title:*** A suitable title that convey the main theme which the diagram intends to portray should be given either at the top or below of it.