

# **MEASURES OF CENTRAL TENDENCY**

## **(Theoretical aspect)**

It is often useful to describe a set of data by an average value which is typical of all the separate measurements. Averages are measures of central tendency or of central location since they are designed to describe the middle or typical value of the distribution. An average is a central value which is usually close to the point of greater concentration of measurement and may in some sense thought to typify the whole set. The central tendency, therefore means the tendency of scores to cluster around the single central value representing the whole set of data. A central tendency is a core value that gives an overall summary of all the values in a set of measures and makes a comparison between different sets of measures possible. The single central value represents the averages. Since an average is somewhere within the range of data, it is sometimes called a measure of central tendency. The kind of averages or measures of central tendency employed commonly in education and psychology are arithmetic mean, median and mode.

## **MEAN**

The mean is one of the most widely employed measures of central tendency. It is the arithmetic average of a set of data. It is more stable index and is a single value which is a true representative of group performance. Most of us employ this kind of average in describing sets of data. It is a score obtained by adding all the measurements and divided by the number of measurements.

Its value is calculated in two ways:

1. Calculation through ungrouped data, and
2. Calculation through grouped data

## **Merits of mean**

1. it is the most commonly used average.
2. It can be easily computed.
3. If the mean of the sub-groups is known, the mean of the total group is easily computed and vice-versa.
4. it is based on all scores in data.
5. It is least affected by the fluctuations of sampling and is therefore considered to be the most stable average.
6. It can be used for further algebraic treatment.
7. It conveys an understandable idea about the other members of the group.

8. It is estimated that mean is used as a measure of central tendency in more than 95% of the statistical analysis of educational research.

9. It is rigidly defined as is a definite value.

10. It is typical value in the sense that it is the centre of gravity.

11. It is calculated value and not based on position in series..

### Demerits of Mean

1. Its value can be greatly destroyed by extreme observations.

2. It can be a value which does not exist in a data.

3. It cannot be determined by inspection.

4. It cannot be used if we are dealing with qualitative characteristics which cannot be measured quantitatively.

5. It cannot be obtained if a single observation is missing

6. It is not suitable measure in skewed distribution.

7. It cannot be located graphically.

8. It cannot be used in case of open-ended class intervals such as below 5 and above 80 etc.