

- d) Random Sampling with probability proportional to size.
- e) Cluster sampling
- f) Area sampling

Non Probability sampling may be classified into:

- a) Convenient sampling
- b) Purposive sampling
- c) Quota sampling
- d) Snow-Ball sampling

Probability sampling Methods

A) Simple Random Sampling

1. Lottery Method: This is the simplest and most familiar procedure of random sampling. If a simple of ten students is to be taken out of a list of 50 students take 50 equals size in a global container and thoroughly shuffle them. Take to steps from the container one after another each time before drawing a stip shuffle the container. Thus we can take the decide sample from a population using Random methods.
2. Use of table of Random numbers

10	06	96	43	27	15
37	73	44	36	91	60
08	54	72	90	74	22
09	25	88	94	65	04
12	11	66	99	49	17

This method is developed by Fisher, Yates and Tippett (Tippet table) to select a Random sample out of a given frame. One should simply start to read number from the table of Random Number.

We can select from the second column from the row we get sample 77,47,44,01 and 80 one thus the decide number of sample can be taken from a table of Random number shown as below.

3. Use of Computer

If the population is very large and if computer facilities are available, a computer may be used for drawing a Random sample. The computer can be programmed to printout a series of Random member as the research decides.

B) Stratified Sample

This is an improved type of random probability sampling. In this method the population is subdivided into homogenous groups or strata and from each strata from random sample is drawn. For eg. University students may be divided on the basis of discipline and each discipline group may again be divided into junior and seniors; The employees of a business firm may be divided into managers and non managers and each of this group may be subdivided into salary, grade wise strata.

C) Systematic sampling (Fixed Interview Method)

This method of sampling is an alternative to random selection. It consists of every nth item in the population after a random start with an item from 1 to N. Suppose it is decided to select a sample of 20 students from a list of 300 students, divide the population total of 300/20. The quotation is 50 (Fraction in the division is not taken) select a number at a random b/w 1 and 15 by using lottery method. Suppose the selected number is '9' then the student numbered '9', '24' (9+15), 39 (24+15), 54 (39+15) etc. are selected as sample.

As the Interval between sample units is fixed, this method is also known as fixed interval method.

D) Proportionate Stratified Sampling

This sampling involves drawing a sample from each strain in proportion to their share in the total population. For example the final year MBA students of the management faculty of a university consist of the following specialization group.

Specialisation	No. of Students	Proportion
Production	40	.4
Finance	20	.2
Marketing	30	.3
Rural Development	10	.1

The Researcher wants to draw an overall sample of 30. Then the strata sample size would be

Strata	Sample
Production	$30 \times .4 = 12$
Finance	$30 \times .2 = 6$
Marketing	$30 \times .3 = 9$
Rural Development	$30 \times .1 = 3$
Total	30